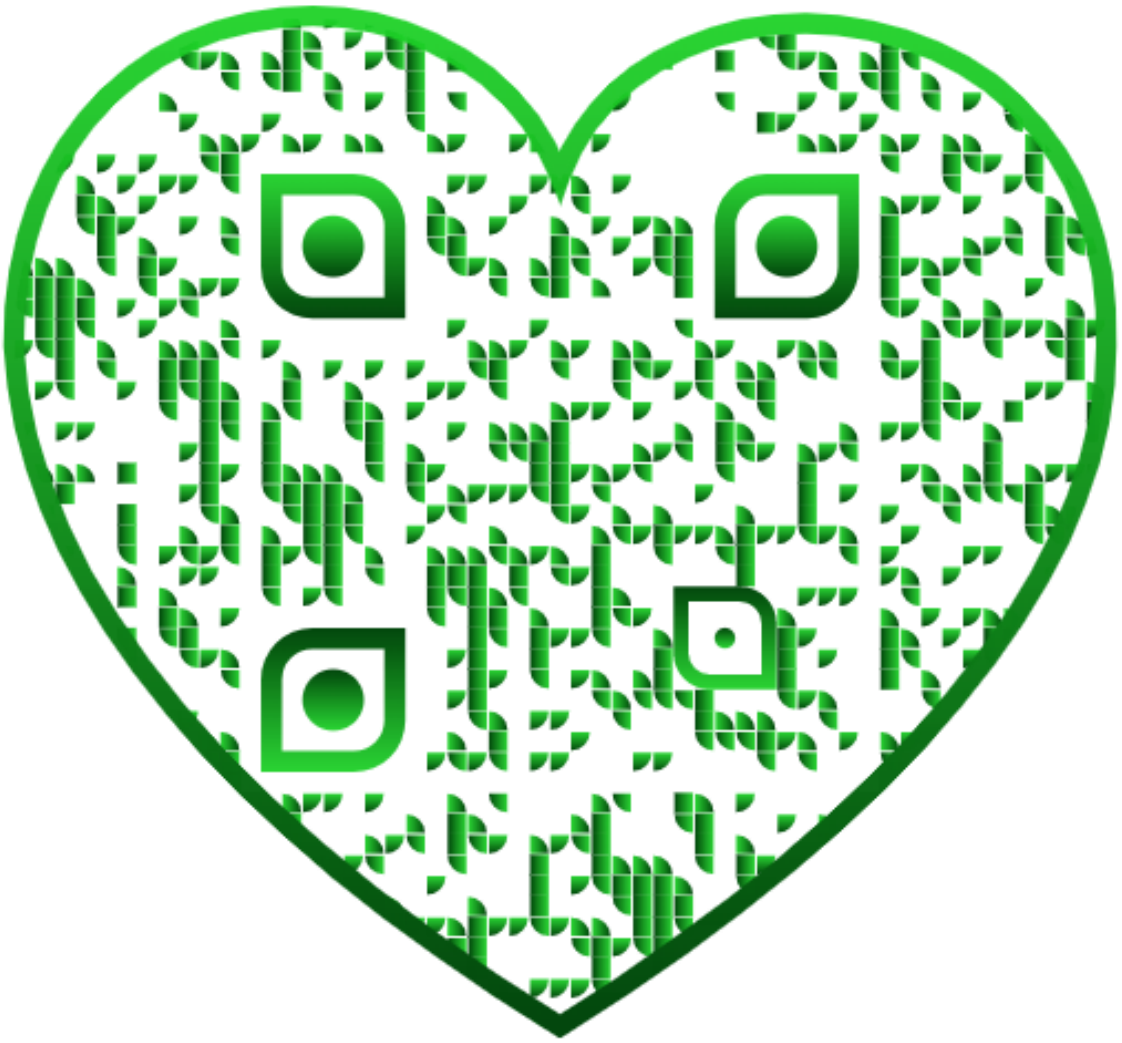
#WHATIS SOUND HEALING?

LYZ COOPER



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Why read this book?

My aim in writing this book is to provide an accessible guide to sound healing for anyone who would like to learn more about it. I've aimed it at the first-time explorer into the world of therapeutic sound, but I hope it will also give some 'grist for the mill' for anyone who already knows a bit about the subject and is hoping to deepen existing knowledge. As we journey through the book together, we'll discover more about the properties of sound and why we react to it in the way we do. We will discover whether our response is a result of our primal human programming, our life experience, or both. The more we understand more about our natural reactions to sound (and about ourselves through the lens of therapeutic sound), the more healing potential sound can have for us. Although this is not a 'how-to' book as such, I will touch on how to use sound and music as if they were 'sonic vitamins' that can improve health and wellbeing, and encourage personal development. I also hope this book will inform you if you are thinking about having a therapeutic sound treatment or looking for a group to join yourself.

In short, in writing this book I hope to show how you can harness your instinctive response to all sound in order to use it consciously for specific healing effects.

20 reasons to start reading!

1 Discover the benefits of therapeutic sound on your body, mind and emotions

2 Fine-tune your listening skills

3 Develop your self-awareness

4 Feel more connected to all that is around and within you

5 Become more connected to yourself and feel fully present

6 Learn how to use sound practically in your life, for reducing pain, clearing mental clutter and helping with recovery from illness

7 Know instantly what serves you and what doesn't

8 Learn how you process and make sense of your experience for improved self-awareness

9 Recognize and release negative feelings from the past

10 Learn how to deal with negativity when it arises

11 Love and appreciate yourself and others more fully
12 Learn practical 'sonic' quick-fixes for stress and concentration
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14 Use sound to deepen and strengthen your relationships
15 Understand the different types of therapeutic sound session
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17 Find a greater spiritual connection
18 Learn how to use everyday sounds as healing tools
19 Understand more about consciousness
20 Learn how to transform your consciousness with regular sound therapy sessions

Key features of this book

In the Introduction I explain how I developed an interest in sound healing and became an expert in the field. Chapter 1 looks at what sound is and how we hear it. Chapter 2 explains what is meant by healing and how we achieve it through sound. Chapter 3 explores how sound heals us physically, emotionally, mentally and spiritually. Chapter 4 gives an overview of how cultures worldwide have used sound's healing properties. Chapter 5 covers what to expect in a therapeutic sound session and from your practitioner, including the instruments he or she might use. Chapter 6 explains the day-to-day benefits of using sound and, finally, Chapter 7 reveals what sound can teach us all about consciousness and explains the all-important altered state of consciousness (ASC), during which deeply therapeutic healing occurs.

This book is designed to make sound healing as accessible as possible with the help of the following features:

- A Q&A approach that chapter by chapter explores the questions that are often asked about sound healing.
- 'Case Study' boxes that share real-life experiences.
- 'Focus On' boxes that give a deeper understanding of certain aspects of sound healing.
- 'Try It' boxes that suggest practical ways of putting sound healing into practice in everyday life, or illustrate in practical ways the theory in the text.

- At the end of the book, there is a ‘What Next?’ section, including a list of further reading and websites, suggesting how to continue your investigations – there is so much more to say about sound healing and so many more fascinating things to learn.

KEY ABBREVIATIONS

The following abbreviations are used in the book for key terms:

ASC – altered state of consciousness
BAST –The British Academy of Sound Therapy
BPS – beats per second
CPS – cycles per second
dB –decibels
Hz – hertz (frequency unit in International System of Units, defined as one cycle per second)

INTRODUCTION

Why this subject?

Sound is a fundamental part of who we are. Since time immemorial we have used sound to assess our surroundings (from early man listening for prey to more modern use of, say, nautical sonar), sense safety or danger, understand or share emotions and create a mood. The sound of our words enables us to communicate and share stories; musical sounds – an art form – enable us to uplift, soothe and restore both ourselves and others; sacred sounds make us feel able to connect to something beyond ourselves, alter our consciousness and nurture our spiritual connection. Sound has the power to change not just our emotional and spiritual wellbeing, but our physical wellbeing, too. This book introduces the use of therapeutic sound – that is, sound used in a specific way with the intention of healing mind, body and emotions, as well as for the transformation of consciousness (itself, as we'll see, a path to wellbeing).

Our brains have evolved to respond to certain sounds in certain ways – for example, a scream sends a surge of adrenaline into our system and the soothing rhythm of the sounds of a lullaby have a relaxing effect on body and mind, encouraging us to sleep. We respond to sound not only with our consciousness, but also with our physical selves. Think of the times a song from your past gave you goosebumps (your brain triggers the release of dopamine, the chemical transmitter related to feelings of pleasure); or the cries of a baby have led to an overwhelming need to protect (your brain triggers the release of oxytocin, the love and bonding hormone).

The right sounds can energize you, lift your spirits, relax you and even send you into a trance. Equally, sound can trigger anger, frustration or anxiety – the endless hammering of a drill while you're trying to concentrate, the nonstop crying of a baby or the unhappy sighs of a loved one, for example. Sound affects each and every one of us at every level – physical, mental, emotional and spiritual. We use sound to influence our mood every day. If you were meeting your partner for a romantic date, what music would you choose to listen to as you got ready? Perhaps something that puts you into a loving and romantic mood. Now think about what you would play if you were meeting your best friends for a night on the town. You'd probably choose something energetic or uplifting. Music is one form of sound – but

there are many more, and I will explain why sound could be considered to be a more powerful therapeutic and life-changing tool than music alone.

Why me?

I often reflect on my journey with sound and am grateful that I found such an amazing and effective healing tool. Its effects on my life have moved me to find out more about why sound is so amazingly powerful and to answer the fundamental question – how does sound improve our wellbeing?

I have been involved in the field of holistic health since 1982, and with sound therapy since 1994. In the early 90s I had a busy career in advertising. In my spare time I pursued my love of complementary therapies, both practising and teaching them. I was doing too much, and eventually my body gave in and I crashed. A few weeks later I was diagnosed with ME and I was forced to do a lot of reflection. One day, exhausted and with a splitting headache, I got into the bath, lit a few candles and began to tone (a singing technique; see pages 97–8). I became totally immersed in the sound and after a while realized that I no longer had a headache. Eureka! I followed my intuition and carried on doing what felt so good. I began using my voice to induce a sense of wellbeing on a regular basis. The more I did this, the better I felt.

A few months later a friend took me to her local New Age shop and inside I found a small Himalayan singing bowl. It took me ages to get it to sing (I know now that I was trying too hard), but when it did I felt a rush of energy through my body – I had found something other than my voice to work with! I decided I wanted to find a training school to learn sound therapy, so in 1994 I contacted the Institute for Complementary and Natural Medicine (ICNM), which has a multi-disciplinary register of training providers, to ask if they had a sound-therapy school on their books. The answer was no – there wasn't one at that time. There was only one thing for it: I began to develop my own techniques.

My quest took me all over the world. I searched in the darkest corners of libraries for information and I trawled the dusty shelves of antique shops to find long-forgotten instruments. I spent hours developing whole-body listening – not just being aware of what I heard, but acknowledging what I felt, what I was thinking and how I responded emotionally. I spent time

playing instruments with others, learning from some great teachers and shamans.

When I was confident that I had the basis of a technique, I took myself on the road, running workshops and giving one-to-one case-study research sessions. I gathered hundreds of personal accounts and out of this informal but informative research emerged different themes. It seemed that many people experienced certain sounds in the same way. Over a five-year period, the methodology evolved, and in 1999 the ICNM officially recognized my practices. In 2000 I founded The British Academy of Sound Therapy (BAST), the first training establishment to offer a formal qualification in therapeutic sound practice. In 2010 the ICNM gave me a fellowship to recognize my worldwide contribution to therapeutic sound. I have spent time on the board of trustees of this organization helping to further the complementary medicine field as a whole. I have an MA in Education and an MSc in Applied Music Psychology – both qualifications have added richness to my knowledge base and given me the ability to be able to conduct research, something which frustrates, challenges and excites me in equal measure! I am blessed to have a wonderful team of people at BAST, every one of whom is dedicated to supporting the development of the organization as well as the therapeutic sound field as a whole. As well as my work within BAST and the ICNM, I am co-founder and director of the Therapeutic Sound Association – our aim is to support the enrichment of the field of therapeutic sound, to promote one-to-one therapists and group practitioners and to support education and research going forward.

Why now?

In recent years there has been a surge in interest about how sound and music affect us. For example, research has shown that more processes in the brain are involved when we listen to music than with any other activity we undertake (as far as we know). Psychologists believe that this may account for why people with Alzheimer's disease are able to recall pieces of music even in the advanced stages of their condition.

I have been researching the therapeutic effects of sound since 1994 and have gathered years of observations and case studies that indicate that therapeutic sound can change lives for the better, giving people relief from life-limiting

physical, mental and emotional ‘dis-ease’. More recently, I have looked specifically at sound-induced altered states of consciousness (ASCs), and at how we can revitalize the ancient practice of trancing for healing effects.

On the one hand therapeutic sound is a time-honoured subject, and yet on the other it is cutting edge. That makes this book very timely. Even after thousands of years of recognizing sound for its healing effects, we still don’t completely understand how sound can be such a powerful mode of healing, but we are getting there. As we do more research, and as we raise awareness of sound’s power through books such as this, so we generate more ideas about how to use therapeutic sound and music in mainstream as well as complementary healthcare, and in areas such as education, advertising and the corporate world, as well as in the home and throughout our daily lives.

CHAPTER 1

What is sound and how do we hear it?

This chapter explains exactly what sound is, as well as its properties and how it's heard. It is not essential to absorb all this technical information (or to be naturally 'musical', for that matter) in order to work with sound for therapeutic effect, but this extra layer of knowledge can be very useful, for example in helping you to choose the most appropriate sounds and instruments for health and wellbeing.

What is sound?

Sound is audible energy – it is the result of particles of matter vibrating to make waves that are 'big' enough and of the right pitch to be audible to the human ear. For us to hear sound, the brain must be able to make sense of the energy vibrations and 'convert' them into sound we can understand.

Why does sound get quieter over time and distance?

Imagine you're holding a tuning fork in one hand and a striking block in the other. You strike the fork on the block to make it ring. As you strike you transfer energy from the block to the tines of the fork, which move back and forth, creating a pressure wave. The pressure wave 'hits' the molecules nearest the tines, which receive the energy of the resonating tuning fork and pass the sound energy to the molecules next to them, which pass the sound onto their adjacent molecules, and so on. Each time the molecules pass on the sonic baton, a little of the sound's energy is lost. It's for this reason that sound eventually runs out. This loss of energy is known as 'decay' and the length of time it takes for the sound to decay altogether is called the 'sustain'. The length of the sustain depends on two things: the strength of the original input of energy (in our tuning fork example that's the strength of the strike on the block) and the medium for sound travel. Sounds need a medium, such as a solid, a liquid or a gas, in which to travel. As sound travels from molecule to molecule, the closer packed the molecules are, the more efficiently the sound travels. Sound travels much faster through steel than through air, for example, which is why people used to put an ear to the railway track to hear a train coming from miles away (please don't try that!). Sound travels four times faster in water than it does in air, which is why your inner ears are filled with fluid (see page 22). Scientists have registered whale calls from up to 10,000 miles across the ocean!

If sound is just molecular vibration, how do we hear it?

As the wave of molecules approaches the human ear, the outer ear catches them and funnels them into the ear canal. The air molecules carry the sound along the ear canal until it reaches the eardrum. This is like an extremely sensitive, tiny trampoline. Behind the eardrum are the three smallest bones in the human body, known as the ossicles: the hammer (or the malleus), the anvil (incus) and the stirrup (stapes). One end of the hammer is embedded in the eardrum, the other is joined to the anvil. When the molecules of sound-carrying energy bounce against it, the hammer starts to rock back and forth, transferring its energy to the anvil, which in turn transfers the energy to the last bone in the chain, the stirrup. This bone is also attached to the inner ear. Inside the inner ear a hollow, spiralled labyrinth is filled with liquid. The sound energy is transferred through the stirrup into the liquid of the inner ear where the ripples flow toward the cochlea. This is lined with little hairs, known as cilia (see page 39), in groups of wavy lines. Each small group of cilia 'hears' a different frequency band. At the base of each single cilia is a receptor. As the sound waves brush over the cilia, a signal passes into the receptors, and down the auditory nerve to the brain. The brain interprets the sound and that is how we 'hear' it.

Why does some sound trigger physical sensation?

Physical response to sound is the result of the way in which our brain processes and interprets the sound (as a memory trigger, a sign of danger or a call to action, for example), and the electric impulses that the brain then sends out to the various glands or neurotransmitters in your body that themselves trigger physical sensation. For example, if you hear a fire alarm, your brain signals to your adrenal glands to release adrenaline into your blood stream. Your muscles tense up, your pupils dilate and your heart rate increases. You're in a state of red alert, ready to fight or flee danger.

On the other hand if you hear a low-pitched sound that lasts a long time, such as Buddhist monks chanting (the low-pitched sound needs to be sustained for entrainment to occur, see pages 59–60), your brain signals to the adrenal glands to slow down the release of another stress hormone, cortisol. Your breathing and heart rate ease up, your blood pressure falls and you relax. If you hear a sound you really like, your brain triggers the release of dopamine, known as the 'pleasure hormone'. You may get goosebumps or a tingling in your spine.

What is pitch in relation to sound?

Pitch is the speed with which sound waves oscillate; it's a colloquial term for the sound's frequency. There are two units of measurement for frequency: hertz (Hz) and cycles per second (CPS). The units of Hz and CPS are precisely equivalent, so 1 Hz is the same as 1 CPS. If you clap once per second, you are clapping at 1 Hz or 1 CPS.

Interestingly, pitch creates the tone of a sound, and all tones begin as a rhythm. Slow wave oscillations give sound 'pulses' that are distinct from one another – we hear them individually. During faster wave oscillations (greater pitch or frequency), the pulses of sound join together to create longer, more 'joined-up' waves, which sound like one continuous tone. By way of example, if you were able to clap your hands at a rate of 20 times per second, you would be clapping at 20 Hz. This will sound more like a very low tone than fast clapping, because the distinct pulses of sound in each clap come so quickly that the brain perceives them as a single tone. The faster the pulses, the higher the pitch or frequency and the higher the perceived tone.

The average human hearing range is from 20 Hz (low pitch) to 20,000 Hz (high pitch), although that range narrows as we get older. The way in which the brain processes pitch has a direct effect on our mind, body and emotions. The brain detects higher pitched sounds as being faster than lower-pitched sounds (because the sound waves oscillate faster), which gives the sense of time speeding up, stimulating the body's systems. We are also more sensitive to high-pitched sounds than to low ones, which means that higher tones call us to action. In contrast, slower-oscillating, lower-pitched sounds give us the illusion that time is passing more slowly. The body's system slows down. Understanding the basics of how this works will help you when you come to choose your therapeutic sound tools (see pages 88–97).

What is the difference between noise and sound?

Technically speaking, noise is any sound that comprises harmonics that do not have a 'mathematical' relationship (as the bands of colour in a rainbow, for example, relate to each other to create a recognizable whole). Without a mathematical relationship, sound waves sound crashy and chaotic. For example, the breaking of the waves on a beach, the tumbling sounds of a waterfall, or the hissing of an untuned radio are all technically noises rather

than sounds. Certain instruments, such as gongs and cymbals, shakers and rainsticks, produce crashy or chaotic noise sounds, too. However, that doesn't necessarily mean that all these noises are unpleasant. You might find some noise, such as the hammering of a drill, annoying or harsh. Someone else might find the monotonous tone and rhythm soothing. You might find the crash of a cymbal energizing; someone else might find it stressful. So, the difference between noise and sound, while having a technical distinction, on a practical level is more a matter of personal preference.

CASESTUDY SOUNDS TO RELEASE FATIGUE

A woman came to me who was experiencing profound tiredness. She had been using a high-pitched Himalayan singing bowl (see pages 90–91) thinking that the higher-frequency sounds would have an energizing effect on her. However, the source of her fatigue was stress – an excess of adrenaline in her system. In order to overcome the fatigue, she needed calming treatments. I recommended she spend 5 minutes twice a day singing a low-pitch tone. She also bought a deep-toned Himalayan singing bowl that she could use along with her voice ideally once a day (at least twice a week). Within a week she was feeling much better. Treating the symptom – the fatigue – wasn't the answer. We needed to get to the root cause.

What is the difference between music and sound?

When sounds are combined and organized 'mathematically' into patterns, rhythms, melodies and chords, the sounds then become known as music. In a nutshell music is sound organized in a space–time framework. All that said, we might perceive many different sounds as being 'musical' without them necessarily being music in the conventional sense. Birdsong is a good example – the sounds birds make are not technically music, but their twitters and warbles may seem like it. And it's not just sounds that are naturally melodic that can act like music: rhythmic and percussive sounds of everyday life can, too. The band the Bee Gees got the rhythm for their iconic 1970s hit 'Jive Talkin'' from the sound of the wheels of their car bumping over tar

strips on the road.

What is rhythm and what are its effects?

Rhythm is defined as a discernible pattern that keeps to some kind of timing structure. Drum beats are the most common forms of rhythm in music, but there are others. Bass guitars provide rhythm, too, as do repeating melodies.

Rhythm And The mind

Most of us find it almost impossible to resist moving to a persistent rhythm, even if it's just by toe- or finger-tapping. This is because rhythm has a powerful influence over an auditory—motor pathway in the brain. As well as making us want to move, rhythm, when played at a certain number of beats per second (see box, page 28), can alter the patterns of our brainwaves, creating an altered state of consciousness (ASC; see pages 130–34). This effect is entrainment or 'auditory driving' (see pages 59–61), and can relax us or energize us, depending upon the rhythm's speed.

Rhythm And The body

If you have ever stood in front of the speakers at a concert, you will have no doubt felt the rhythm pounding in your chest. This is known as resonance – when the low-frequency rhythm matches the low-frequency energy of the physical body. We can use resonance to soothe muscle tension and help with other physical symptoms, such as arthritis and other forms of pain. In rhythm therapy a practitioner beats a drum over the client's body, enabling the client to 'feel' the beats in a form of rhythmic massage. The speed of the rhythm will determine whether the massage is soothing or energizing.

FOCUSON ENTRAINING THE BRAINWAVES

An altered state of consciousness (ASC) occurs when we entrain the brain to move in time with a certain rhythm and through that create certain effects – usually a sense of calm, peace or deep meditation – in the body (see pages 130–34). It may occur when we experience drumming sounds of between 3 and 4 beats per second (bps) that last for several minutes.

An EEG machine measures the electrical activity in the brain. Studies show that people exposed to a continuous beat of around 3 bps will begin to experience a ‘theta’ brainwave state. These are the brainwaves we experience during REM (or dreaming) sleep. They oscillate at a low frequency of between 3 and 7 Hz, putting the brain in a deep state of relaxation, during which many different healing processes may occur, including the release of mental tension and the learning of new and positive behaviour.

Rhythms that induce alpha-frequency brainwaves, which oscillate at between 8 and 12 Hz, may enhance creativity, intelligence and emotional development, and create a heightened sense of self-awareness.

Rhythm And The emotions

Rhythm influences emotional wellbeing through a technique called ‘musical expectancy’. This creates ‘frisson’ (or ‘chills’), a form of emotional stimulation – as when a piece of music gives you goosebumps. In a therapeutic sound session, frisson may energize or relax, depending upon whether the practitioner is playing from slower to faster, or vice versa. Think of the music in Jaws that warns the shark is approaching. John Williams, the composer, increased the volume of the rhythm, as well as the number of instruments, to suggest oncoming danger, energizing and instilling fear in the audience.

In summary

Rhythm is a pulse of sound energy that stimulates the primal senses. Being a low frequency (a pulse, not a tone), it closely matches the frequency of the physical body. Therefore, rhythm is really good for treating any kind of physical symptoms. Owing to the motor–auditory pathway in the brain, rhythm can alter the flow of the chemical messengers cortisol and adrenaline. Fundamentally, rhythm has the potential to get to the ‘root’ of our physical imbalances.

What is an interval and what are its effects?

An interval is the relationship between two notes and, stripped back to its simplest, can be consonant or dissonant. Consonant intervals are either melodic or harmonic and occur when the two notes generate sound waves with a close relationship to each other (the peaks and troughs of the waves are fairly closely matched or related) so that the sounds are perfectly 'in tune'. In music we talk of such intervals as being 'perfect'. An octave is a perfect interval of 12 notes (including flats/sharps). A perfect 4th is an interval of five notes and a perfect 5th is an interval of seven notes. We often talk of sounds that are in tune as being harmonious. Sound waves that do not match as well create a dissonant interval, such as a minor 2nd or a major 2nd. You know when an interval is dissonant because sometimes you hear discord – that is, a tension or a 'beating' (see box, opposite) as the frequencies collide.

Most research into intervals and how we perceive them relates to the melodic interval, which is one note played immediately after another, and used most commonly in musical composition. Harmonic (sometimes called 'vertical') intervals occur when two notes are played simultaneously and sustained for a period of time (like a two-note chord). This technique is most often used in a therapeutic sound session.

It's worth stating again here that you shouldn't worry if you don't want to engage with the more technical information about sound given in this chapter. You don't need to be 'musical' to benefit from sound healing.

TRYIT PRACTISE VOCAL BEATING

Vocal beating is a really good exercise in ear training as well as illustrating how sound 'feels', as the intervals between the notes change. You' ll need a friend to do this exercise, as well as a quiet room that has good acoustics.

1 Stand facing each other and decide which of you is going to 'slide' and which is going to hold the tone. Then, both start singing an 'OO' in a pitch that is comfortable for both of your voices – somewhere in the middle of your register. Around about the 'the' in the song 'Some

where over the rainbow' is a good starting point.

2 The 'slider' starts gently lowering his or her pitch in a sliding tone, while the 'holder' sustains his or hers at the original tone. you should hear a fast beating that slows down as the slider's tone falls.

3 practise sliding up and down around the chosen pitch and notice the change in the overall sound as the waves collide and the intervals get closer together and further apart.

Does a sound need to be harmonious to be healing?

Some people find the beating of closely related, dissonant intervals, such as the major or minor 2nd, disconcerting and disorientating. However, these intervals can also be tremendously freeing, exciting and stimulating. Keep in mind that sounds do not have to be harmonious to have a healing effect.

Nonetheless, more commonly, sounds that we consider to be harmonious create more peaceful effects, and sounds that are more discordant tend to be challenging and stimulating. Think of it like having a massage. Soothing, sweeping, 'harmonious' effleurage strokes are very good for relaxing the body and mind and easing tense muscles. Choppy, 'dissonant' tapotement movements (that 'beat' the body) may not feel as pleasant as effleurage, but they do break up all the knotty bits of tension in the muscles – even though they may feel less welcome, they are no less healing.

When I give a therapeutic sound treatment, I use closely related and therefore discordant intervals such as the minor and major 2nd as my 'choppy bits' to create emotional expectancy and sonic tension. I then release this tension with a more harmonious interval, such as a perfect 5th. The table on pages 34–5 lists some of the intervals used in sound healing and their effects on the mind and emotions.

What is the most effective interval for sound healing?

The most consonant interval of all is the perfect 5th (see below). Other than the octave (see page 34) and unison (the same note originating from two different sources, such as two voices or two instruments), the perfect 5th is

the most stable and therefore the most technically pleasing to hear. If you sing ‘Twinkle, Twinkle Little Star’, the second ‘twinkle’ is a fifth above the first (known as the fundamental). The two notes sound ‘perfect’ together because they are of an interval with a greater number of matching peaks and troughs in its sound waves than other intervals. Our brains interpret this as being harmonious and stable. A perfect 4th isn’t quite as consonant as a perfect 5th, but we perceive that as being harmonious, too. To hear a perfect 4th, try singing ‘Here Comes the Bride’ – the ‘here’ and ‘comes’ create that perfect 4th.

FOCUSON INTERPRETING THE POWER OF FIVE

In sacred geometry the human body conforms to the musical 5th. Stand with your legs wide open and your arms outstretched to the sides – just like Leonardo da Vinci’s *Vitruvian Man* (c.1490). If you were to draw a line between each point in the star shape your body makes (so, from the top of your head, to your left hand, to your left foot, then right foot, right hand and back to your head), you would create a pentagon. A few years ago a French astrophy sicist Jean-Pierre Luminet and his team at te observatorie de paris discovered that the universe may be a three-dimensional pentagram – a dodecahedron. If their discovery is correct, the universe is a three-dimensional geometrical representation of a musical 5th. perhaps this, along with the way the shape of the human body conforms to the 5th, is why we find this interval so pleasing and uplifting.

FOCUSON UNDERSTANDING INTERVALS AND THEIR EFFECTS

In this table I have used C as the fundamental note for sake of easy reference. The table distils information from many music psychology studies that I have adopted into my method of therapeutic sound to help

work on the emotional and mental levels of our being.

Don’t worry if you don’t know about music theory – knowledge of the notes and intervals, for example, is not essential to practising sound healing. You can always return to this area for further exploration once you have got to know more about sound healing.

Notes	Interval name	Effect on the body, mind and emotions
C–C	Octave	Stable, spacious, expansive. Creates a neutral, supportive space.
C–G	Perfect 5th	Uplifting, happy, healing, peaceful – a ‘sonic cuddle’.
C–A	Major 6th	Expansive, uplifting. Creates a light-filled space.
C–E	Major 3rd	Happy, light, neutral. Creates an inner place of rest.
C–F	Perfect 4th	Harmonious, stable, cheerful, mysterious. Creates a warm space.
C–G#	Minor 6th	Tension, longing. Creates a space full of possibility.
C–D#	Minor 3rd	Melancholic, gentle. Creates a space in which to release grief.
C–F#	Tritone	Harsh, alien, restless, cold, thrilling. Creates a self-healing space.
C–A#	Minor 7th	Yearning, desire, tension. Creates a dynamic space.
C–D	Major 2nd	Close, disconcerting, tight. Creates a place for sonic healing.
C–B	Major 7th	Magical, serene. Creates a dynamic, slightly discordant space.
C–C#	Minor 2nd	Scary, exciting, disorientating. Creates a shift in consciousness.

However, harmony doesn’t necessarily make one particular interval better for sound work than another. Really, that depends on the effects the practitioner is looking for.

How is an octave relevant to sound healing?

The octave interval is the same ‘nominal’ note played or sung 12 steps either higher or lower (counting seven primary notes and five sharps or flats). Think again of the song ‘Somewhere Over the Rainbow’, the ‘some’ and the ‘where’ are an octave apart. An octave is a very stable interval, because the wave forms of the two notes have more matching peaks and troughs than any other interval. When I give a therapeutic sound treatment, I use an octave when I need to create a feeling of stability and safety for my client.

How does amplitude affect a sound’s ability to heal?

Amplitude is another word for volume and it is measured in decibels (dB). Scientifically speaking, the dB measures the intensity of the pressure wave of sound – a whisper causes low pressure waves that measure around 20dB; a motorcycle whizzing by creates higher pressure waves to produce approximately 100dB of sound. Amplitude (volume) is important when it comes to using sound as a tool for healing.

Some therapeutic sound instruments (such as drums) are effective because we not only hear the sound, but also feel it as a result of its amplitude. Therapeutic sound practitioners working with rhythm, for example, may use slightly louder drum beats when they want a client to feel them more strongly in the body. With Himalayan or crystal singing bowls, or gongs (see pages 90–94), quieter sounds invite you to look inward, while louder sounds create expectancy. A good practitioner will create a treatment that incorporates ebb and flow to provide ‘dynamic’. A treatment with a good dynamic has a range of amplitudes, with alive and vibrant parts as well as deeply relaxing and soothing parts. The practitioner takes the client on a journey of undulating sound for a truly holistic session that stimulates body, mind, emotions and spirit.

Do we need to use instruments to heal with sound?

There are many non-instrumental sounds that can make us feel good and can improve wellbeing, such as birdsong or a waterfall, for example. The voice, for many, is one of the most therapeutic sound tools because the human becomes the instrument. Psychologically, this creates an immediate connection between the sayer/singer and the sound.

Other non-instrument sounds can have a therapeutic effect on us, too. Lee

Berk, the former president of the Berklee College of Music, California, led a research team that concluded that the sound of laughter increases the levels of dopamine in the blood, and reduces levels of adrenaline and cortisol.

Anita Gidlöf-Gunnarsson and Evy Öhrström, researchers at the Department for Occupational and Environmental Medicine at the University of Gothenburg, Sweden, demonstrated that people who live in urban areas and are exposed to lots of urban sounds, such as the noise of traffic, are more likely to experience stress-related symptoms than those who live in the countryside. This suggests that the sounds of nature can heal us, too (and that city sounds can cause dis-ease). In fact, whale calls, birdsong, waterfalls, rain and other pleasant sounds of nature are regularly incorporated into relaxation music.

FOCUSON LOOKING AFTER YOUR HEARING

As sound travels 'into' your ears, its vibrations move tens of thousands of little cilia – tiny hairs that literally catch the sound and send it down the auditory nerve to be decoded by your brain (see page 22). If they become damaged (for example, when exposed to excessively loud noises, such as those that cause ringing in your ears), the cilia can never repair themselves. Even continual relatively loud noise – such as drilling outside a window or the hum of factory machinery – can damage the cilia in your ears. It is therefore advised, where possible, to avoid frequent exposure to noises that measure over 80 dB (such as a milling machine, a garbage disposal unit or a washing machine on full spin), especially where noises measure over 87 dB (such as an underground train, a motorcycle, a lawn mower or a printing press).

Try downloading a dB meter onto your smartphone or tablet and use it to measure the sounds you're exposed to every day. If you think you're regularly around sound that could be damaging your ears, buy specialist earplugs (such as those used by musicians or DJs) to protect your ears.

Can sound healing benefit someone ‘unmusical’?

Although I have explained much of the theory behind how sound and music work, it’s important to remember that you don’t have to be ‘musical’ or to remember all this technical information in order to benefit from sound healing. I believe that absolutely anyone can enjoy sound’s therapeutic effects, even people who are technically tone deaf (which means that they are unable to reproduce a tone that they hear and/ or tell two close notes apart).

Overall, why is sound so healing?

Sound provides a bridge between our bodies and the world we live in, each other and more deeply our innermost, spiritual selves. Even when it begins outside of us, we literally ‘embody’ it – feeling its vibrations within us. When we sing or play an instrument, we create sound that has an emotional effect on our body and mind – the sounds release chemical messengers that make us feel a certain way.

Furthermore, sounds trigger memories for us. Not just the memories that come from our own past experiences, but also reminders that there is life beyond the self. Think of the sounds of nature – these remind us of the beauty and richness of life, of the existence of other things. Stimulating us in this way puts us within the context of the wider world, reminding us that we are part of something bigger and greater than our individual selves. Many people find this sense of interconnectedness of all things a form of healing in itself.

Sound is a powerful tool for expression and communication. Not only do the sound waves ripple toward us, the emotion that the sound triggers resonates within us. Think of the infectious joy in a child’s shriek of excitement; or the deep empathy we may feel when we hear someone else’s sobs of sadness. Shared sound (not just groups of people coming together to create music, but simple communication, conversation, confession or storytelling) can build communities and strengthen bonds. Through altered states of consciousness (ASC; see pages 130–34) sound enables us to tap into levels of our inner selves that we might never otherwise discover or draw from.

Why do we connect with sound so deeply? I believe it’s because there is no other medium or experience that touches us in so many ways and with such potential for profound, transformative effect. In the next chapter we’ll explore

how this profound connection with sound can be used for healing – and consider what, exactly, we mean by ‘healing’.

CHAPTER 2
What is healing?

If Chapter 1 was about understanding the nature of sound, then this chapter needs to complete the picture and look at what we mean by healing. Is it overcoming physical illness? Is it releasing mental stress? Is it a spiritual awakening or an emotional reconnection? Is it all these things, or a combination of them, unique to each of us? Then, to add the finishing touches to our sonic masterpiece, we need to ask how we achieve healing through sound – how therapeutic sound works on and with us for improved wellbeing.

What do we mean when we use the word healing?

The word 'healing' when applied to a wound, for example, is the process of the knitting together and repair of tissue. Applied to illness it refers to the body's ability to fight foreign invaders (say, bacteria or viruses). In both these cases healing is physical – repair in the body – and it takes place over time. However, healing is far more than just a physical process. It is a holistic endeavour that occurs on all levels of our being: yes, physical, but also mental, emotional and spiritual. This process can take time, although some methods of healing can seem to have an instant impact – think how de-stressed you might feel immediately after a massage, for example. Other methods can seem slow, even ineffective, until one day we wake up and pain, in whatever form, has gone. With a holistic approach to healing, therapeutic sound is a trigger that resonates on all levels for 'whole person' wellbeing.

Can we influence the healing process?

I believe that the way we approach our own healing can limit or expand the potential for positive self-transformation according to our own attitudes and actions.

In my practice I consider eight ways in which I believe we can each expand healing potential, whether the catalyst for healing is sound, or something else.

Step 1: Be a compassionate witness

You are the doer of your actions, the thinker of your thoughts and the feeler of your emotions. When beginning any healing process (and in everyday life), look compassionately on your own actions, thoughts and feelings because this is how you learn, and in this way you stop inner resistance. Being a compassionate witness opens up the potential for transformation in all you do, think and feel.

Step 2: Open up to the potential for self-healing

The brain is the body's mission control. Chemical messengers – hormones – can influence the nervous system to change patterns of behaviour and promote physiological healing, just by the power of the mind. We know that what we believe to be true can have a profound impact on our healing because innumerable scientific experiments have seen evidence of the placebo effect. Believe in your power to heal yourself.

Step 3: Accept responsibility for your experiences

You are the only person creating your experience right now. It is easy to say 'you made me angry' or 'you're stressing me out', but these statements are not true. We feel the way we feel because we generate those feelings ourselves. By extension, then, we also have the power to transform negative feelings into powerful, positive ones. The same is true for healing – we have the power to begin our healing process by choosing a proactive path toward wellness.

Step 4: Be aware of power play

Seek out 'healthy' healing situations – those where the power to heal is left in your own hands rather than with the person healing you. If you're going for a therapeutic sound session, look for a practitioner who takes a client-centred approach and who suits you. The healthiest sessions are those in which the practitioner listens to your needs and accommodates them, enabling you to choose your own healing path, rather than imposing their own (see box, opposite).

Step 5: Reflect on barriers to healing

I think if you asked a straw poll of ten people whether or not they want to be healthy, most would say yes. However, sometimes a state of dis-ease becomes a crutch or a source of attention that is harder to let go than we might freely admit. As the healing process begins, it's important to reflect on what we take from our dis-ease, and in what ways it might comfort or nourish us, and therefore why we might be resistant to letting it go. There's nothing wrong with feeling like this, but identifying and releasing the thoughts and emotions that hold us in an unhealthy place gives healing a chance.

CASESTUDY TREATMENT POWER PLAY

Many years ago I booked a reflexology treatment in a spa hotel. I was enjoying my treatment when the therapist announced that she had felt in me a deeprooted fear, owing to a trauma I had sustained lifetimes ago. She said that it was likely that it was buried deep within my unconscious, but not to worry, she would clear it for me. Before I could say anything, she stood up, swept her hands up my legs several times and made a whooshing sound with her voice. She then announced that I had been healed. I had not given consent for 'deep-rooted-fear therapy'. My reflexologist hadn't considered the potential consequences of working on my wellbeing without consent. She had taken away my own power to make healing decisions for myself. The experience taught me that a good practitioner is a facilitator who empowers a client to heal themselves.

Step 6: Release attachment to the outcome

Healing comes in many forms; fixing on a single outcome may hamper the healing process and even prevent its full success. A fixed goal might mean you stop looking for further healing once you reach that goal, when perhaps there was more to come. Therapeutic sound practice is a holistic process and healing may not present itself in the form that we originally hope for, or indeed expect (see box, opposite).

Step 7: Learn to love yourself, symptoms and all

Healing is also about loving ourselves and seeing the gift of our current state of health. So much human pain and suffering is in the mind. If we see our symptoms as 'bad', we add to our mental suffering and exacerbate the symptoms of dis-ease. Think about this physiologically: stress (negative, panicky thinking) creates tension in the physical body, depresses the emotions and raises blood pressure. It also affects the autonomic nervous system (which controls such things as breathing and heart rate). All these factors create an unnecessary barrier to healing. However, if we see our symptoms in a more positive light, perhaps as an opportunity to learn more

about ourselves, we create a much more valuable, healing energy that enables us to process the symptoms and to work with them for the better. A simple change in perspective can open the mind to the notion of restoring wellbeing.

CASESTUDY HEALING IN UNEXPECTED WAYS

A few years ago a lady came to me for treatment – she said she wanted me to 'cure' the arthritis in her knees. She also had an overactive bladder, which meant she was visiting the bathroom several times a night. This was affecting her quality of sleep, and increasing her stress levels relating to her inability to move freely. Nonetheless, it wasn't her bladder issue that she'd come to me for: her focus was to rid her knees of arthritis. She told me that she was in so much pain, she wanted it gone in just four sessions. I explained to her that it may be more helpful to think about the next four sessions as being part of a therapeutic process and to see to what degree her symptoms changed during that time, then review.

At the end of the third week, this lady climbed the stairs to my treatment room more easily than ever before. And she had stopped needing the loo in the night. However, she still had some arthritis symptoms and she decided to stop her treatment. She wasn't thinking about how she had begun to heal her whole self, rather than just a single aspect of herself, and how her healing journey had only just begun.

Step 8: Accept that healing can happen

Research shows that our internal healing processes can set to work regardless of the proven (or otherwise) efficacy of the healing trigger, and regardless of whether or not we believe in the efficacy of our approach to healing. In other words feeling a little bit disbelieving about our ability to self-heal is not enough in itself to overcome the body and mind's innate striving to return to its natural state of balance.

In summary

In my opinion these eight strategies provide the keys to complete healing, or ‘wholing’ as I also like to call it. By watching ourselves compassionately as we journey through our healing process and being open to the power we have to influence our wellbeing, we are able to achieve a greater potential for self-healing.

Are being healed and being cured the same thing?

Healing doesn’t always mean curing. I remember one student telling me that she was treating a woman who was terminally ill with cancer. In her case cure didn’t ever happen, but healing did. At the end of the therapeutic sound treatment, the woman said that she felt so relaxed, pain-free and at peace she could quite happily die. She wasn’t cured but she was healed of her suffering, so much so that she was ready to let go of her life. Healing takes many forms – and as we saw in the story on page 49, this isn’t always the way we expect, or even hope for.

Is sound healing suitable for everyone?

In the next chapter we’ll discuss how therapeutic sound works on each individual, but fundamentally anyone and everyone can benefit from using sound in a therapeutic way. However, there are certain conditions and circumstances that make certain forms of sound work inappropriate at certain times and without proper medical guidance. This is why it’s so important to choose a practitioner who adheres to a strict code of conduct if you have any concerns for your own mental wellbeing. For example, without close liaison with a medical team, I would not treat someone who was suicidal or diagnosed with paranoid schizophrenia and was experiencing unmanaged symptoms (although many people with such conditions have had great benefit from therapeutic sound in a controlled and supported setting). An altered state of consciousness (ASC; see pages 130–34) requires a certain amount of mental stability in order to ensure safe practice. Such a person may well benefit from some gentle relaxation music, but anything deeper or more therapeutic might be inappropriate without controlled conditions and parameters. If you’re ever worried about what’s appropriate, consult a registered sound practitioner, who will guide you – this goes for physical illness, too.

CHAPTER 3
How does sound healing work?

This chapter looks at the many ways in which sound can help us – physically, emotionally, mentally and spiritually. It explores the psychology of sound and music in order to find out more about sound's therapeutic qualities. In fact, sound healing is nothing new! People have been using sound to improve their wellbeing for thousands of years. It's the combination of this ancient knowledge with new research, development and cutting-edge science that has enabled a rebirth of the use of sound as a form of therapy and healing.

What's the difference between sound healing and sound therapy?

In a nutshell, sound healing is the use of sound to improve health and wellbeing, while sound therapy is the same, with an added reflective process. There are different ways of approaching sound healing. At my own teaching institution, The British Academy of Sound Therapy (BAST), we use certain instruments in a certain order to enable the brain to slip gently into an altered state of consciousness (ASC) that offers many healing benefits (see pages 130–34). It's the ability to reflect at this level that turns sound healing into sound therapy. In an ASC, insights may arise that help a person to improve their health and wellbeing, and these can be explored with guidance from the practitioner using a reflective model – at BAST we use the 5Rs (see pages 64–7)

How does sound affect the physical self?

Research we've undertaken at BAST has shown that a therapeutic sound session can reduce heart rate and blood pressure and encourage a deep, relaxed state of being. Lower bass and rhythm sounds are particularly helpful here as we can feel them in our bodies; these lower frequencies resonate with the denser parts of the human body, such as bones and fluids (in physics this is known as 'sympathetic resonance'). These sounds create a relaxed state in which muscle tension can simply melt away, alleviating any associated pain. Sound also affects the way the brain emits hormones and other chemical messengers and, as we have already covered, our brainwaves (see page 28).

When a client comes to me with physical symptoms such as arthritis or other chronic pain or muscle tension, I will choose lower-pitched sounds and instruments, such as gongs and drums, that can be felt physically. You can

also use lowpitched Himalayan bowls on the body to massage the back, which is lovely if you have muscle tension in the neck and shoulders, or the back itself.

How does sound affect the emotional self?

In Chapter 1 we looked at the emotional effects of intervals (see pages 34–5), but sound works on the emotions in other ways as well.

Dynamic: changing volume

Dynamic means changing the volume of sound during treatment. As volume increases, we experience an auditory illusion that something is approaching (see page 29). As the sound appears to come nearer, we react emotionally to it – the emotion is usually triggered by the nature of the sound (an approaching train might make us panic; approaching birdsong might make us happy). In a sound treatment the skilled practitioner will use dynamic to 'move' the client's emotional level, creating light and shade. This stimulates the release of certain feel-good neurotransmitters in the brain. In effect dynamic acts as a kind of massage for the emotions.

Expectancy: dynamic and pitch

Musical expectancy (referring to the brain's anticipation of a musical passage to come based on what has already passed) is created not only by dynamic, but also by the rise and fall in pitch. The higher the pitch of a sound, the more stimulated the body's systems, to create frisson (see page 29). Frisson is often accompanied by a release of dopamine and endorphins – neurotransmitters associated with positive mood. In a therapeutic sound session, for a person with depression, for example, I may use a crystal singing bowl to create higher-pitched sounds at a minor 2nd or a perfect 5th interval (see pages 33–6) because they are psychologically uplifting and energizing. But building musical expectancy is important, too. So a treatment would start with lower sounds and build up to higher-pitched sounds, creating a greater level of musical expectancy. Think of the rise in pitch of a piece of rave dance music – up, up, up to the crescendo – which causes a corresponding rise in emotional excitement. When the music reaches the top, it usually then breaks out into a fast beat sequence where everyone jumps up and down with arms and glow-sticks waving. In a therapeutic sound session, the rise of a gong wave can create these thrilling effects (I call them 'gongasms'!).

Emotional healing through sound, then, is the product both of dynamic alone and of the combination of dynamic and pitch in the form of expectancy. With careful manipulation of these elements, a sound practitioner can greatly enhance the therapeutic effects of a treatment.

How does sound affect us on a mental level?

Being in an altered state of consciousness (ASC; see pages 130–34) during a sound-healing session has a calming effect on the mind. In ASC, mental imagery can occur as the brainwave frequencies reduce, leaving us to hover in a wonderful, warm and fuzzy twilight state just above sleep. We may experience drifty, dreamlike imagery, and coloured 'jelly fish' blobs may ebb and flow behind closed eyes. We may find complex imagery that transports us to 'other places' that may or may not have a meaning for us. Insights may arise from other levels of our consciousness that help to provide comfort or we may have ideas to help us on our life-path. Around 15 minutes in this space results in mental refreshment.

Less often, the mind can race as the body relaxes, not wanting to let go. This can result in anxiety and fear. This is a natural part of the process of letting go and perhaps it reflects that we often find it hard to shed even the aspects of life that don't serve us. I recommend that anyone who experiences this kind of resistance when relaxing physically should visit a sound practitioner for guidance. We'll explore ASC more in Chapter 7.

How does sound affect us on a spiritual level?

The word spiritual means different things to different people. For me treating the spirit means adopting practices that nurture and develop our awareness of a connection with something bigger than the parts of us that we can see and touch. Some people think of their spiritual being as their 'subtle levels', documented in many Eastern philosophies. The best-known models of subtle-energy levels are the chakra system of Indian Vedic teachings (see pages 76–80) and the Chinese system of meridians. In these philosophies the physical body is attuned to an esoteric, intangible and equivalent subtle body, whose energy affects wellbeing.

Quantum physics endeavours to understand more about subtle energy, and is now confirming what the Vedic teachings have been saying for thousands of

years: everything in the known universe is made from subtle energy.

Therapeutic sound places the listener in a receptive state in which there is an increased awareness of being connected to all things. This awareness creates resonance, an expanded, uplifted and positive state. Regular sound sessions enable us to have a greater awareness of this level of ourselves, bringing a sense of profound peace, and our appreciation of the wonder of existence and our part in it. In my experience, just having this reinforced to me every time I work with sound is profoundly and deeply healing.

What is entrainment?

Dutch mathematician and scientist Christiaan Huygens, the inventor of the pendulum clock, was the first to document the principles of entrainment. One day in 1666 he noticed that the pendulums of a pair of clocks mounted on the same board had synchronized. He concluded that this synchronization had happened over time as small amounts of energy were transferred between the two clocks via the board. The process of synchronization occurred in both pendulums: the pendulum that was swinging slower gradually sped up, while the pendulum that had been swinging more quickly gradually slowed down. The transfer of energy stopped only once the two pendulums were swinging at the same speed. This is entrainment – the synchronization of more than one oscillating body over time (whereas sympathetic resonance – see page 55 – occurs almost immediately). Entrainment can happen only if there is a relationship of some kind between the relevant bodies, and energy is able and allowed to transfer back and forth between those bodies in some way.

The science of quantum physics teaches us that everything in the known universe is made from energy and that the energy outside of us and the energy inside of us is inseparable – energy is constantly transferring within and without us. In subtle entrainment, rather than energy being transferred through something tangible, such as the board mentioned above, it can be transferred by what we see, hear, feel, think or believe. We see subtle entrainment all the time in daily life – when two people mirror each other's body language or tone of voice, when women who live or work closely together find that their menstrual cycles synchronize, and so on.

How does entrainment work for healing?

There are myriad rhythms in our body that are influenced by entrainment. For example, a fast rhythm stimulates the body's energy system and as a result heart rate speeds up. This is a result of the auditory–motor pathway that means the human body instinctually becomes entrained to a piece of music. The result may be stimulation or relaxation of the system and it happens through a process known as 'auditory driving'. This basically means that the sounds we hear and feel can move mind and body, alter consciousness and allow an individual to drift into a state of being similar to a trance or deep relaxation. This in turn creates a 'space' in which a therapeutic process can begin.

By way of illustration, take two three-minute compositions. One composition, such as a piece of dance music, has a fast tempo; the other, such as a waltz, has a slow tempo. When we listen to each piece, we'll experience the dance music as having been over more quickly than the waltz – even though both pieces were three minutes long. This is a form of auditory illusion. Because of the entrainment principle, the way we process sound gives us an increased or decreased perception of time. When the body tunes in to the fast music, it speeds up – it feels stimulated. When it tunes in to the slow music, it slows down – it feels calm. To make the most of the entrainment principle, sound practitioners principally use tonal and/or rhythmic techniques to relax or stimulate the system. Tonal sounds have no discernible sense of timing, so the entraining effect is very subtle – it is the lack of rhythm. Used alongside instruments such as singing bowls and gongs (see pages 90–94) that produce long tones, tonal techniques encourage the system to relax into the lower brainwave frequency states. Therapeutic vocal techniques are also usually long, low tones – like the Buddhist meditation chant Om, the universal sound. (Of course, a person could chant Om using any tone, but it tends to be a low one because of the effect of this pitch on the mind, body and spirit.) Even mantras (a traditional form of chanting), which can have a quicker speed and quite elaborately beautiful melodies, tend to be more monotone and slower when used for therapeutic purposes. We don't yet fully understand how this type of entrainment takes place, but we know that it does.

CASESTUDY BRINGING SOUND AND MUSIC

TOGETHER

In 2010 I was asked to collaborate on a track with the ambient music trio Marconi Union for a new range of home-spa products. The brief was to create a piece of music for relaxing to in the bath.

Marconi Union are not sound therapists, so the client wanted us to work together to combine ambient music with known therapeutic effects. I explained the elements that Marconi Union needed to incorporate into the piece of music, suggesting a beat that starts at 60 bpm, a normal resting heart rate, and then slows down to around 50 bpm to entrain people into a relaxed state. I suggested that at the end of the piece of music, they bring the listeners back to 60 bpm to restore them to the present. I explained that there should be a low drone in the background of the music, and an empty, abstract melody floating over the top. I also explained that they needed to incorporate a perfect 5th and an octave (the perfect 5th is uplifting and the octave encourages safety and stability; see pages 33–6).

Marconi Union composed a couple of different pieces and I advised on how to tweak them, in the end choosing the piece that had the greatest therapeutic effect. Called ‘Weightless’, the music was chosen by an independent research panel as being more relaxing than nine other compositions. The media called it ‘the most relaxing track ever’. We had very busy press launches with radio interviews all over the world – whenever the track was played on radio, the presenter advised the driver to pull over and to play only snippets of it at a time. The piece was so effective that it became Time magazine’s 11th Best Invention of 2010.

In drum therapy a practitioner uses rhythm to ‘drive’ the system, with faster rhythms stimulating and slower rhythms relaxing. A tempo of around 3 bps entrains the brain to experience theta brainwaves, which oscillate at a frequency experienced during dreaming sleep (see box, page 28). At this point the body begins to experience the therapeutic effects of an altered state of consciousness (ASC).

How else does sound work to improve wellbeing?

Sound creates a connection between the sound itself, our consciousness and the outside world. Clifford Sax, at The British Academy of Sound Therapy, and I have developed a model that perfectly marries the human mind–body–energy system and sound; we call it 'the 5Rs' model (see opposite).

The 5Rs are resonance, resistance, responsibility, reflection and release, but they do not necessarily occur in that order. Each has either a message to deliver about what is going on in our body, mind or emotions that we can then use to guide us toward healing, or its own healing effect. The 5Rs model is a valuable tool that helps us to realize we are, at any time, either resonating with or resisting something (we can also be ambivalent to it, and therefore feel nothing, but in this case there is nothing to work with as it is a neutral energy). When we recognize resonance we know it is life affirming because it feels good. Resistance, on the other hand, tells us there is work to be done. Therapeutic sound is a means to experience release. Sometimes release happens directly as a result of the sound's dynamic within us; sometimes we need to use reflection (looking inwardly to explore the discord within us) in order to learn the causes of our resistance and thereafter enable healing. Understanding that we are the only ones responsible for our reactions to the sound gives us control over our release – the letting go of the thing (pain, emotional unrest, stress, whatever it is) that is causing dis-ease. This model has set many people free from life-limiting dis-ease – you can find out more about it on the BAST website (see page 141), but for now try the exercise in the box above, just to get used to how resonance and resistance feel within your body, so that you can recognize them when you start working with sound. The Greek philosopher Aristotle conceived of the notion of 'human flourishing'. When we have blockages in place (whether these are recognized or within our unconscious), we stop that flourishing. Sound, in contrast, enables us to flourish by resonating with us and enabling us by to identify resistance and blockages, allowing us to release them so that we free up our energy.

TRYIT IDENTIFY RESONANCE AND RESISTANCE

Positive and negative thoughts and emotions create changes in the system that can be felt: resonance increases energy, positive feelings and a sense of expansion; resistance makes us draw in, impedes energy flow and makes us feel tense.

1 Think of a time in your life when something wonderful happened, perhaps when you fell in love, won an award or laid eyes on your new baby. Bring to mind the moment, but don't attach yourself to the story – just drink in the feelings it creates. Breathe in, and multiply how you feel by 100 – allow the amplified feeling to fill your whole being, feel the resonance.

2 now think about something that has a negative effect on you – perhaps a news story that upset you in some way. Again, don't connect with the story itself, just with how it makes you feel. Can you feel your body tensing up in resistance to it? Where do you hold that resistance?

3 create the first visualization, filling with resonance again. experience the polarity, the ups and downs, peaks and troughs, as you switch back from resistance to resonance, ending in resonance before coming back to the space.

What is the construct?

Think about something that stops you from living the life you want. How do you feel? Where do you feel it? It is likely that your thoughts are creating emotional and physical feelings right now. You may feel a tight solar plexus or neck and shoulders, for example. I call this 'the construct'. A sound therapist chooses instruments that will help the client work on their construct.

CHAPTER 4

What can we learn from other cultures?

To understand why sound is so good at improving wellbeing, it helps to delve back in time and journey across continents to find the roots of therapeutic sound practices. This chapter explores some of the wealth of ancient and cultural knowledge that we draw on today.

How was sound important for early humans?

Archaeological evidence enables us to interpret how ancient peoples may have used sound for its powerful effects, including healing – although this was probably something that happened by instinct rather than intention. First, music and sound would have been a way to bring communities together and we know that bonding and feeling part of a 'pack' is an important aspect of wellbeing. Second, weather and the animal and plant kingdoms were essential to survival, and our ancestors would have developed methods – through prayer, ritual and ceremony – that would have given them a feeling of connection and influence over the natural world. As worship and ceremony began to form part of life, sound and music would have provided a means to communicate with nature, the gods and the cosmos.

What effects did sound have for early practitioners?

In an enclosed space, and if the ceremonies and music sessions went on for a while, it is likely that people would have experienced an altered state of consciousness (ASC), sending them into a trance-like state that would have been seen to have varied benefits. For example, ASCs could have been used as an early form of meditation and relaxation therapy, and to reduce pain and promote physical healing.

What early instruments did our ancestors use?

The first evidence of musical instruments is of the lithophones – rocks and stalactites struck to produce sound – that have been found in early cave dwellings. Some even have ancient markings on them showing where to strike for maximum sound production. Archaeologists have also found carved ringing rocks – the drawings demonstrating the importance of the rocks in community life. Interestingly, lithophones with art carved into them seem to produce more sound than those that are uncarved. Caves themselves may also have been instruments of sound – some seem to have been shaped to harness and channel sound specifically to encourage alpha brainwave frequencies (see page 28). Research suggests that early cave dwellers may have

specifically chosen the most resonant parts of the cave for their paintings. It's almost as though our early ancestors were trying to bring their pictures to life with sound.

How have world traditions used sound for wellbeing?

It's fascinating to see how traditions both ancient and modern have come together to create the systems of sound healing and therapy we know and use. Some of these systems exist in their near-original forms (mantra, for example, based in the Vedic tradition, see pages 76–80, is still used in yoga practice as an aid to healing), and some give us basic principles that have evolved to suit modern-day therapeutic sound practices (for example, BAST therapists do not look to an outside force for healing power, but rather believe that this resides within the person being healed).

FOCUSON PROJECTING STONE-AGE SOUND

At Stonehenge, an ancient stone circle in Wiltshire, UK, some of the standing stones appear to have been shaped in such a way as to cast sound around the site. I spent a decade performing at Stonehenge with my group Soundscapes. Through trial and error, we found the perfect location for our stage within the stones, a position that enabled the sound to be carried throughout the stone circle. Later, I read the book Stone Age Soundtracks by Paul Deveraux and was fascinated to learn that the two standing stones we had chosen as the backdrop to our perfect position were what I think of as 'stony speakers'. Was this where the high priest or priestess of the Stone Age stood to address the audience? Were the stones deliberately carved to project sound, or was this just an accident?

According to Deveraux, the shaping of the stones at Stonehenge was intentional – aiming not just to amplify sound, but also to alter brainwave frequencies during group ritual. Of course, we'll never know for certain, but this and similar findings across the world indicate that early humans knew enough about the power of sound to allow it to play a key role in ceremony and ritual.

Shamanic traditions

In tribal cultures, a shaman has the gift of being able to communicate with the spirits of the ancestors and of animals and plants by entering an altered state of consciousness (ASC), in order to bring back healing as well as sacred teachings and knowledge. Shamanic traditions are found throughout the world's cultures, from the Sami peoples of Lapland to the Warao of Venezuela (see box, page 74). There are many ways in which a shaman might enter an ASC, but drumming, singing and using rattles (as with the Warao) and other sound-makers are consistently key features.

In the shamanic tradition, sound and music are considered to be vehicles for transporting and transformation, taking shamans to other realms from where they can bring back transformative healing power. Even shamans who use healing plants in order to restore wellbeing also use sound to enter a trance state at the start of a healing session, and continue using sound throughout to maintain that trance.

FOCUSON LEARNING FROM THE WARAO SHAMANS

The Warao of the Venezuelan rainforest believe the shaman, wisiratu, can heal any ailment by invoking helper spirits, who draw out spirit invaders, or hebu, from the person being healed. Once the hebu have gone, the person is said to be healed. The shaman uses a healing instrument called the hebu-mataro, the largest healing rattle in the Americas. Its head is made from a large gourd, which represents the actual head of the spirit helper. Inside, small river pebbles represent the spirit helper's voice; they rattle to draw out spirit invaders.

Before starting the healing ceremony, the shaman uses his own voice to call his spirit helpers into the rattle and into himself. He then holds the rattle over the person he is healing and starts shaking it slowly, gradually speeding up the rhythm, then slowing it down again. This undulating rhythm carries on throughout the session and helps the shaman to enter trance. All the while, those around the shaman sing

songs. Eventually, the bad spirits are believed to enter the head of the rattle where the sounds of the spirit helpers kill them.

Pre-Incan civilizations of Peru

The ancient pre-Incan civilizations of the Mochica, Chimú and Huari crafted clay vessels known today as ‘whistling vessels’ or ‘whistling pots’, so called because blowing into them produces a high-pitched whistling sound. Discovery of the vessels at burial sites has led archaeologists to hypothesize that they were created for ceremonial use associated with the afterlife. It is not clear whether the whistling was a sonic side effect or deliberate intention on the part of early pre-Incan craftsmen, but it is now believed that the vessels may have been used for group trancing.

CASESTUDY THE WHISTLING VESSELS

My first trancing experience with the Peruvian whistling vessels is one of the most profound I’ve ever had. At this group session 14 whistling vessels were used. People started to blow steadily into the vessels. Slowly, a shrill whistle, as if made by many mysterious stove-top kettles, began to fill the room. The sound wasn’t too loud, but it was penetrating. Before long I became aware of buzzing, whirring and clicking sounds – all of them in my head. I developed a pulling sensation in my solar plexus, drawing me backward. Behind my closed eyes I saw what looked like a black hole. I was just about to go down the hole when the session stopped. It took me a long time to come round and when I did I was so impressed by the trancing properties of the whistling vessels that I now have my own set of seven.

The patterns on the pottery may be revealing in this context. The upper half of the vessels depicts everyday scenes; the lower half depicts fantastical scenes of beings who are halffruit and half-human, or half-animal and half-human. Drawing on the evidence of the pots’ decoration and the locations in

which they have been found, it seems likely, therefore, that they were intended to provide a bridge between the real and otherworldly realms, drawing strength from the spirits for use on earth, and enabling earthly beings to have a direct communication with otherworldly realms. In my experience the sounds they make have incredibly powerful ASC effects (see box, page 75) and I suggest that healing may well have been a result of trances induced by the vessels' whistling.

Vedic philosophy

The Vedas is a collection of books that predates the establishment of Hinduism in India. Vedic philosophy is just one Eastern tradition that promotes the use of sound as a form of therapeutic healing – there are many others, including Jainism, Buddhism and Sikhism. However, the description of mantra in the Vedic scriptures makes Vedic philosophy especially significant.

The Rig Veda contains one of the earliest descriptions we have of the use of mantra, a sacred sound (or sometimes combination of sounds) used to align us with the healing and transformational energy of the universe. The Vedas tell us that mantras first existed in the ether, from where rishis (seers), who were enlightened enough to hear the sacred sounds reverberating through the cosmos, retrieved them. In the Vedic system, mantras are sung in Sanskrit, a holy language given by the gods to humankind in order that humans may communicate directly with God.

Arguably the most well-known mantra is the 'seed syllable' Om (see box, page 78). According to Vedic tradition, Om is the sound of creation – it is the sound that the rishis heard during deep meditation, the sound of God, from which everything sprang. When we chant the Om mantra, we tap into this primal, all-giving, life-affirming energy.

Tradition states that as you chant a Sanskrit mantra you massage the chakras (energy centres) and nadis (energy channels) of the subtle body. This, in turn, helps maintain health and wellbeing. (See box, page 80.)

TRYIT CHANTING OM

The aim of this exercise is to feel the effect on your body of chanting Om. The pitch of your chant (see step 2) isn't as important as the way you sing the Om. The 'O' part represents outward flow of energy – it is the exhale, the giving, the flowing away. The 'M' part is the receiving aspect of energy – the inhale, the accepting, and the inward reflection. Try to make the two sounds as evenly spaced and paced as you can. You'll need to find a quiet place to sit undisturbed for 10 minutes.

1 Begin by breathing deeply into your belly to enable you to sustain a longer tone. This is more relaxing and 'complete' than a shallow breath into your chest.

2 With your lips closed, hum in a low pitch (easier to sustain). After a few minutes, open your mouth slightly to make the 'O' sound (sounds like 'AW'), then close your lips into the hum of the 'M'. Keep the sounds evenly spaced. repeat for as long as you wish.

3 When you stop chanting, take a few slow, deep breaths. Reflect on how you feel, trying to isolate the resonating parts of your body.

Om is not the only healing mantra, of course. Other mantras are said to have their own, specific healing effects. There are even some accounts of mantras bringing people back from the brink of death -the Maha Mrityunjaya (great death - conquering mantra), which is said to invoke the power of Lord Shiva (one of the three Hindu 'master' gods), perhaps being the most powerful among them.

Ancient Eastern instruments

In Buddhist and Hindu traditions, bones of holy people were commonly made into sacred objects in the belief that their energy could add to the potency of the ceremony and prayer. Among those objects were musical instruments.

For example, the damaru, or damru, is a double-sided drum made using the tops of one male and one female human skull. The skull parts are joined crown to crown and an animal skin is stretched across each cut side. Two beaded cords are attached on either side of the central join of the drum. To

beat, players twist the drum back and forth in their hand so that the cords swing and the beads strike the skins. According to Hindu tradition, the god Shiva made the first damaru as a means to create the universe. The sound of a human thigh- bone trumpet known as an rkang dung would sometimes accompany the beating of the drum in ceremonies and at prayer sessions. Together, the drum and the trumpet, as well as a mantra, enabled a person to release him- or herself from attachment to illness and suffering.

FOCUSON BALANCING THE CHAKRAS

The *Vedas* teach us that positioned along the line of our spine, from its base to the crown of the head, are spinning energy centres knowns as chakras. Each chakra has many physical and non-physical correspondences relating to our wellbeing. The crown chakra, at the top of the head, for example, relates to a sense of divine connection and 'knowing', as well as to the central nervous system, the top of the brain and the pineal gland; the brow chakra, in the centre of the forehead, relates to the eyes, the base of the skull and the pituitary gland. According to Vedic teaching, our physical, emotional and spiritual wellbeing relies upon our chakras resonating or vibrating in balance. A certain Sanskrit bija or 'seed' sound is related to each of these chakras. The seed sound Om, for example, represents the crown chakra. The bija contains the power of the chakra and it is the sound a healthy chakra makes as it spins. When we chant the bija mantra, we use sound to activate the related chakra, reminding it of how it should sound if it's healthy. In the case of Om, chanting may help to balance the central nervous system and remind us of our divine connection.

Classical civilization

Western classical civilizations, in the form of the Greeks and the Romans, took a mathematical view of the relationship between sound and healing. The Greek philosopher and mathematician Pythagoras, for example, devoted his life to understanding the connectedness of all things through numbers. He

was also an accomplished musician, who especially believed in the healing power of stringed instruments, and there are many accounts of him healing people from all kinds of diseases, physical, emotional and mental, as well as what was called ‘disease of the soul’, with sound.

The story goes that when walking past a blacksmith shop one day, Pythagoras noticed that differently sized hammers made different sounds as the blacksmith struck them against the anvil. Pythagoras realized that the larger hammer sounded one octave lower than the smaller hammer. He took the hammers away, weighed and measured them, and found that the smaller hammer was half the size and weight of the larger one. This told him that size (number) and sound were directly related. This discovery formed the foundation of the Pythagorean system of healing with sound and music.

Songs and the lyre (a small, stringed, harp-like instrument) were the most common facilitators of sound for Pythagorean healing, each being played or sung in different ‘modes’ to create different effects. A mode is a series of notes that have a different relationship to each other as a result of their different intervals (see pages 34–5), each creating a different mood or energy. They have names, too. For example, Phrygian mode is considered to be darker and can result in frenzy and confusion and Lydian mode is thought to be brighter (the brightest of all) and can cheer the soul. Pythagoras introduced the notion that responding to a wellbeing problem with its opposite can promote healing. In one account a wood-gatherer heard the sound of a lyre being played in the Phrygian mode and became frenzied and anxious. When Pythagoras suggested the musician change his tune to play in a slower mode, called the Spondaic mode, the man was healed. Although these sounds are more melodic than trance-inducing, they are often used in music to create certain moods in the listener.

As well as the lyre, Pythagoras used his own musical invention to promote healing. Known as a monochord, it was a long wooden box with one string stretched between two points. The monochord enabled Pythagoras to uncover the secret of harmonics and their mathematical relationships in the world. Furthermore, he calculated the distances between the planets and converted these distances into musical tones. He claimed that his system would eventually free the mind and soul to hear the ‘harmony of the spheres’,

audible only to those who were enlightened or divine. Some sound healers use Pythagoras's celestial tones for healing even today.

The Pizzica Tarantata

Meaning 'bite of the tarantula', the Pizzica Tarantata is a trance-healing practice for women thought to have first appeared in The Bacchae, an ancient Greek story dating from around 405 bce. The story teaches us that if we repress our sensual nature, we cannot become spiritual and the repressed feelings turn into a destructive force, rather than flourishing as a creative one.

The fields around the Taranto area in Italy are known for being full of tarantulas and women working in the fields were often bitten. The story goes that, when bitten, one particular woman started dancing wildly, thrashing around until she had danced the poison out of her body. Thereafter, when women in the village were bitten, they danced to the sound of drums and were in this way healed.

It wasn't long before the story gave rise to a specific healing practice: thrashing movements to frantic rhythmic drumming on large tambourines. In time the practice morphed into a form of spiritual exorcism, during which women who were thought to be hysterical, depressed or 'insane' with love were drummed into trance inside a church until they were forgiven by St Paul.

These days the Pizzica Tarantata is gaining popularity again. The healing intention is that, through trancing, women can get in touch with their sensuality and free up any blockages to their sexual energy, as well as any energy 'stuck' in the heart and throat that might manifest as an inability to love or to communicate.

The main instrument in this healing ceremony is the tamburello tarantata, which resembles a large tambourine. The drummer holds it in the palm of one hand, leaving the fingers free to beat the drum along with the free hand, producing syncopating rhythms. At the same time the cymbals around the edge of the drum rattle and chime, producing sounds that help to induce trance.

In summary

There are strong connections between the ancient use of healing sound and the wide range of therapeutic sound approaches today. Many of the ancient approaches I have discussed in this chapter have one, overriding common thread – that sound and rhythm induce an altered state of consciousness (ASC; see pages 130–34), and that in this state we are able to gain insight and obtain sacred knowledge to transform not only our health and wellbeing, but also our whole lives, as well as connect us with something greater than our mortal selves.

CHAPTER 5

What happens in a therapeutic sound session?

We have looked at what sound is, and at what healing is, and at how sound has been used all around the world for its healing properties. Now it's time to explore what actually goes on in a therapeutic sound session. This chapter starts by introducing the instruments commonly used in a sound session, describing their different benefits. It then goes on to explore all the different types of sound sessions on offer, including group, one-to-one and personal practice. All this information will help you decide what kind of sound therapy will suit your needs best, whether you are looking to improve your general health and wellbeing or promote recovery from a specific ailment.

What instruments are available at a sound session?

It's useful to understand how each of the instruments work and the type of effect they have, particularly if you want to try sound healing for yourself at home, but when it comes to therapeutic sessions any trained, experienced practitioner will be able to assess which instruments and techniques will be of most benefit. Bear in mind that playing technique and the pitches or intervals used during practice also contribute to the instrument's healing effects.

If your symptoms are physical, such as pain (including arthritic pain) and muscle tension, a sound session with a drum or a gong could be helpful. If something more like a sonic cuddle is needed, try a Himalayan singing bowl. If you need mental or emotional expansion, space and tranquillity, a crystal bowl will do the job beautifully – visit a practitioner in that case as you'll need more than one bowl for therapeutic effect. It is always a good idea to speak to a practitioner as a combination of instruments may be more beneficial for you. If you want to practise at home but are not sure which instrument to use, try the one that 'calls' to you most, and go from there. And, of course, you always have your voice (see pages 97–100). Just a few of the most commonly encountered and easily accessible sound therapy instruments are featured here, but many others can be used, including tuning forks, the monochord, the harp, the rainstick (as mentioned later) and many more.

CASESTUDY THE POWER OF THE BOWLS

At one of my workshops, after a short introduction to the day, I gave the group a Himalayan bowl soundbath (see page 103) lasting 15 minutes. During this time I played four different bowls. After a few moments I saw tears running down one participant's cheeks. The lady was in a wheelchair. She told me that she had broken her back in a car accident eight years previously. During the session she began to feel pins and needles in her feet – the first sensation she'd had in that part of her body since the accident. This is one of the most dramatic responses to a Himalayan singing bowl I have ever encountered. The lady was grateful, emotional, even overwhelmed by her experience. For this woman, the singing bowls had enabled her to feel a sensation she had thought she had lost for ever.

Himalayan singing bowl

Also known as Tibetan singing bowls, and made from metal alloys known as 'bell bronze', Himalayan singing bowls come in a variety of shapes and sizes, from shallow 'dishes' to deep, flat-bottomed, straight-sided bowls. Singing bowls are hand-beaten, which gives them a rich harmonic sound, and are often beautifully carved with symbols of protection, as well as mantras and prayers.

To play a singing bowl, a practitioner usually runs a 'wand' or 'puja stick' around the rim of the bowl. Wands made from different materials give rise to different harmonics: harder woods lead to higher tones, and softer woods bring out lower tones. In addition, playing slightly harder will draw out the higher harmonics, and playing softer will draw out the lower ones. Sometimes, a practitioner will gently strike the bowl with a soft, felt mallet, or will draw a violin bow gently across the rim of the bowl. In the latter case the sound is icy and ethereal. If you place your lips near the rim of the bowl while it is sounding and manipulate the sound with your mouth, making a silent 'wah, wah, wah' motion, you can get an almost UFO-type sound, which I use as 'sonic tapotement' to help stimulate the system (see page 32).

Most people find the rich sound signature of the Himalayan singing bowl a bit like a sonic cuddle: the sound can be deeply relaxing and gentle. Key

words to describe the effects are: ‘warm’, ‘soft’, ‘gentle’, ‘golden’, ‘sunshine’, ‘earthy’, ‘loving’, ‘relaxing’, ‘nurturing’.

The gong

Known to have existed since the Bronze Age, gongs come in many forms, but broadly fall into two main categories: those that are flat or rimmed (also known as tam-tam) and those with a central boss or ‘nipple’. Either type may be only a few centimetres in diameter or much bigger – the largest-known gong has a diameter of more than 2 metres (6½ feet)! Gongs are usually hand-hammered to give a harmonically rich sound, and may be machine-polished.

A practitioner will usually use a flat gong to create a lovely sustained sound, perfect for therapeutic work. Commonly, practitioners use gongs with a diameter of 65cm (25in) or more. At these larger sizes, the gongs produce a greater range of sounds, with a longer sustain (see page 21), encouraging deeper relaxation.

The sound signature of the gong varies from high, light and shimmery sounds to deep, rumbling and earthy sounds. All large gongs are capable of producing very loud and ‘crashy’ sounds. Different mallets produce different sounds. The floomi (a rubber ball on a stick) creates sounds that are wailing, melancholic and atmospheric. I play my gongs mostly using a soft, fluffy mallet. With one mallet in each hand, I gently but quickly strike the gong in a kind of drum roll that brings the volume up and down in a smooth wave. A gong can also be played with just one hand, in a more percussive technique.

Practitioners usually begin playing the gong sensitively, building up the sound as the treatment progresses. BAST therapists will even create a ‘gong score’ – a composition uniquely created for each client’s needs. A gong is perfect for working on physical imbalances such as pain, arthritis and other joint pain and muscle tension. However, gongs are also good for any dense, emotional feelings and for releasing any feelings of ‘stuckness’ in the system. Key words to describe the effects of a gong are: ‘powerful’, ‘big’, ‘strong’, ‘dark’, ‘oceanic’, ‘dragon-like’, ‘expansive’, ‘physical’, ‘activating’, ‘fizzing’, ‘confrontational’.

Crystal singing bowls

Crystal singing bowls are contemporary sound-healing instruments that are made from 99.997 per cent quartz (the remaining 0.003 per cent is mainly water and naturally occurring trace minerals).

A practitioner plays a crystal bowl by running a suede or rubber-covered wand around the rim to create the sound, playing in different ways including using certain intervals (see pages 34–5) as the ‘active’ healing ingredient. The pure sound from the bowls means that they may sound louder than they are, so they need to be handled sensitively by the practitioner. Less is more.

CASESTUDY GONG HEALING

As part of her case-study requirement, one of my students treated a client with multiple sclerosis (a muscle-wasting disease) using gong therapy. This particular client had restricted movement. She could get up onto the treatment table only by sitting on the edge and using her arms to pick up each leg, one at a time, and swing it up onto the tabletop. After only a 40-minute treatment, the client was able to swing her legs over the side of the table and get down without using her hands at all. Not only that, but she was amazed by her range of movement and how much energy she had for days following the treatment. The more treatments she had, the greater her energy bank.

Our ears are not often exposed to pure tone and therefore the sound of crystal bowls can feel a little alien or unnatural at first. Ultimately, though, it creates a sense of freedom. In my experience crystal bowls hold a client in the most beautiful, serene, pure and clean space. In a treatment using multiple instruments, I will usually finish with the purity of the crystal bowls, emptying out the harmonics into spaciousness. Key words to describe the effects of a crystal singing bowl are: ‘ethereal’, ‘otherworldly’, ‘angelic’, ‘cool’, ‘linear’, ‘astral’, ‘expansive’, ‘extra-terrestrial’.

The drum

Most sound practitioners use single-sided drums (known most commonly as frame drums, and also as shaman drums, moon drums and medicine drums) made either from animal skin or from a synthetic skin. They are often used for inducing altered states of consciousness (ASCs; see pages 130–34). If a person is anxious about the future, angry or grieving for the past, drums help to focus the mind on the present. They are also really good for people who need to be reminded of who and where they are, such as those with dementia, posttraumatic stress disorder, or mild to moderate disassociative disorders, such as memory problems. As the drum is such a physical instrument, played over the body, it can be beneficial for easing any physical imbalances, which might cause tension or pain. A research study by US oncologist Dr Barry Bittman demonstrated that group drumming increases numbers of cancer-killing cells in the body. He concluded that: 'Group drumming tunes our biology, orchestrates our immunity, and enables healing to begin.'

FOCUSON EXPLORING CRYSTAL SINGING BOWLS

These are the main types of crystal singing bowl and their effects when used in therapeutic sound practice.

Frosted crystal singing bowls

Frosted crystal singing bowls are clear bowls with a sand-blasted finish to make them opaque. They have very few fluctuations in wall thickness, which means they produce a pure tone without any harmonics.

Clear and clooured crystal singing bowls

These bowls are see-through. Adding extra crystals, dyes and minerals gives them colour. Fluctuations in bowl thickness may provide harmonics, making the sound less pure than with a frosted bowl.

Practitioner and infinity bowls

Made from clear quartz, these bowls look like a very large wine glass with a stem, but no base. The therapist holds the stem, then runs the bowl close to the client's body. Some sensitive people may feel the sound vibrations as a comforting massage against the body. An infinity

bowl has a bowl at each end of the stem.

One-to-one, a practitioner may play the drum over or around the body, so that the sound waves reach the client, allowing the sound vibrations to be felt in ways that are both comforting and penetrating. Key words used to describe the sensations are: ‘calming’, ‘powerful’, ‘earthy’, ‘primal’, ‘physical’, ‘sensual’, ‘ancient’, ‘shamanic’.

In summary

Overall, then, the harmonically rich and warm Himalayan singing bowls provide a reassuring sonic cuddle and can be really good for reducing muscle tension. The gong (also harmonically rich) seems to vibrate through the body, ‘fizzing’ and releasing ‘stuck’ or dense physical and emotional imbalances. Crystal singing bowls, the foundation of tone, produce a purer sound without harmonics that is expansive and spacious, perfect for deepening relaxation and bringing much-needed sonic space to busy minds. Finally, the drum brings us into line with its rhythm, its deeply therapeutic primal sounds helping us to release stress and reconnect with our essential nature. From all this, you can see that there is a sound-healing instrument to suit every need, which allows practitioners to be able to choose the most appropriate one for each client during any given session.

How can the voice be used in sound healing?

There are so many ways in which the voice can be used therapeutically, such as with mantra, shamanic songs (some without words, these seek to channel the landscape, embody the sacred and enable the heart to sing) or holistic voice therapy (a combination of breath, movement, voice and visualization). The focus here is on toning and overtoning because these techniques are a great introduction to using the voice in sound healing and have a deep, powerful effect.

Toning

This is the use of sustained tones, usually vowel sounds or vowel-like sounds, that mix ‘soft’ consonants such as ‘w’, ‘y’ or ‘h’ with vowels to direct the sound vibrations to certain parts of the body for certain effects. Different

healing systems use different sustained tones, although they might be aiming for the same healing purpose. For example, Vedic practitioners chant the sound yam to balance energy in the heart chakra (see box, page 80); Western practitioners use the sound 'AAAHHH' for the same effects. It doesn't really matter what sound you make, then, it's the sustained tone that's sending your body into a deeply relaxed state. After a few minutes, the effect of holding this long, sustained tone may be to expand your sense of space and time, lulling you into an altered state of consciousness (ASC) – see pages 130–34. Working with voice feels almost like being massaged from the inside – it's perfect for reminding us who and where we are, as a kind of 'sonic mindfulness' (although 'mind-emptiness' is perhaps a more accurate term!). Toning has been described to me as 'nurturing', 'gentle', 'cuddly', 'soft', 'resonating'.

Overtoning

This is a technique in which you use the tongue and mouth to separate the natural harmonics in the voice so it sounds as though you're singing more than one note at one time. This sounds harder to do than it is in practice! All our voices have a different sound because of the unique shape of our throats, mouths and so on. These 'colour' the sound of the speaking and singing voice. With 'normal' singing, the harmonics within our voices are blended together, but by shaping our mouth and tongue in certain ways (by singing an 'EEE' to an 'OOO', for example), we are able to isolate and enhance certain harmonics within the voice, using our tongue or mouth rather like a prism that splits light into the colours of the rainbow. Try toning in a fairly high pitch, moving slowly from 'EEE' to 'OOO' and back again – listen for any whistling sounds.

Over the last 20 years, every group in which I have presented both toning and overtoning has said that overtoning creates a deeper ASC than toning. I believe this is due to the expanding nature of the harmonics, enabling consciousness to expand too. With this in mind, when I am doing any voice therapy I start with toning and then go into overtoning. People have described overtones to me as 'ethereal', 'otherworldly', 'a sonic rainbow', 'sparkly', 'bell-like', 'fairy-like'. Even if they have never heard the sound before, many people say it seems familiar to them.

FOCUSON HEALING VOWEL SOUNDS FROM ANCIENT TIMES

Vowel sounds have been revered as powerful and sacred for millennia. For the Greeks and Romans, the vowels corresponded to ‘the seven planets of old’ or ‘Chaldaean’ planets – those that were visible to the naked eye. The Greeks and Romans chanted these vowels to worship the wandering heavenly guardians; their reverence for vowels being a result of the expansive nature of the vowel sounds and the way they psychologically appear to stretch space and time. In a healing-sound session, vowel sounds are used in a similar way, their sustained tone promoting relaxation and eventually entry into an ASC. In order to create vowel sounds, we need to make more space in our mouths; we don’t fully close the mouth and throat.

Therapeutic voice treatment is wonderful for anyone who needs deep and gentle nurturing. Those who are sensitive and vulnerable, such as those with emotional imbalances, suffering from stress, anxiety or depression or with a need for comfort, prefer the softer approach of toning. Overtoning brings a more spacious feel, expands and deepens the ASC, bringing a more spiritual dimension to the treatment.

What types of sound session are there?

There are three main types of sound session – passive group sessions, group sessions that require participation and one-to-one sessions (‘passive’ may not sound appealing but simply means the sound experiences are created by the practitioner to share with you). All of these are best interspersed with practice at home (see pages 108–111) wherever appropriate. Whether you want to work on a specific issue (such as headaches or anxiety) or are looking for more general life enhancement, such as feeling more joy or a sense of balance, bear in mind that there are sessions to suit everyone, regardless of age, culture, experience, musical ability or need. This makes healing sound one of the most accessible therapeutic practices of all.

passive group sessions

If you choose to attend what we are describing as a ‘passive’ sound-healing session, there are a range of different sound experiences that may be shared with you by the practitioner running the session, from what are called ‘soundbaths’ (see page 103) through ‘drum journeys’ to ‘soundscapes’, all of which are explained in the following pages (soundscapes may be participative as well as passive, see page 102). At a passive session you might be invited to bring a yoga mat, pillow and blanket and to lie on the floor, or you might sit in a chair. The sound practitioner will usually ask you to close your eyes to improve focus and ‘absorption’ into the therapeutic potential of the sound.

The instruments that the practitioner uses will depend upon the type of passive group session. For example, soundbaths – which involve you being immersed, or ‘bathed’, in beautiful, healing sounds – tend to incorporate a mix of tonal instruments such as Himalayan and/or crystal singing bowls and gongs. Melodic instruments are not used because the aim is to induce trance, rather than heal through harmony (see page 32). Voice baths will use vocal techniques rather than instruments, sometimes including mantra (see pages 77–9). Drum journeys are the modern-day version of traditional shamanic practices (see page 73), and might include rhythmic drumming for 20 minutes or so to encourage trance. Soundscapes involve using multiple instruments simultaneously – some may be melodic (such as the flute), others not (such as the gong). This results in deep relaxation and also carries the potential for trance, although any trance is likely to be lighter than the purely non-melodic sessions. Some soundscape sessions may also include elements of dance and movement for attendees to watch.

Group sessions with participation

We focus here on soundscape workshops and sonic art as these are both reasonably accessible and very effective, but participative group sessions also come in other forms, such as vocal groups (comprising group chanting of, say, mantra, as well as toning and overtoning; see pages 97–9), and drum-and-rhythm groups (which might use rhythm games or general free-form drumming).

A soundscape involves translating something into sound – perhaps feelings,

experiences, a poem, a piece of art. It is a wonderful vehicle for communication and expression beyond words. Soundscape workshops may be single sessions that occur over a few hours, or courses that run for several weeks. They are suitable for people who may never have played a singing bowl or gong before and aim to help them create a soundscape to perform to an audience, or within the group just for the heaven of it! Workshops encourage creativity, musicality, teamwork, and listening and communication skills. Participants may draw on a life experience – for example, a journey from a dark place in their lives to a recovery, actively encouraging long-term healing. People struggling with addiction and substance misuse, or with terminal illness, as well as those with anxiety and other mild to moderate mental health issues have all benefited from these workshops.

FOCUSON HAVING A SOUNDBATH

When I give a soundbath (using the BAST method), I begin with the Himalayan singing bowls to settle people in. Around 5 minutes into the session many people are experiencing an ASC, which deepens as the session progresses. After 10 minutes I start to bring in the gongs – they sound more powerful and carry the group along on a sort of sonic 'ocean wave'. After another 10 minutes I move into the complete crystalline spaciousness of the crystal bowls and the therapeutic power of the intervals. Then, I begin a therapeutic percussion sequence. This starts with delicate little chimes and moves to the sounds of the rainstick, as well as other non-rhythmic sounds that get progressively more rhythmic, ending in a crescendo that is emotionally rousing. This latter process helps to bring my group members' brainwave frequencies back to an alert and awake state before they get into their cars to drive home! I often add an element of reflection in line with the BAST 5Rs model (see pages 64–7), inviting the group to explore and evaluate the causes of the sounds and their effects on emotional, mental and physical wellbeing.

Sonic art is an exciting, emerging field that brings together art, sound and

therapy. For example, a group can decide to interpret a piece of art or a poem, translating it into sound. Or, participants might create an original piece of art inspired by the sound. The therapeutic effect is the feel-good factor derived from being creative.

one-to-one sessions

A one-to-one sound session involves working in a focused and specific way with one practitioner. The client usually lies on a treatment table while the practitioner plays sounds around the client's body. Sometimes the practitioner places instruments, such as a Himalayan singing bowl, on the body. There are so many ways in which you can work with sound in a one-to-one session, such as drumming, sounding and voicing with the practitioner. In holistic voice therapy, for example, a method of one-to-one work using the voice, breath and movement, the practitioner and client work together to release any imbalances that may be creating mental, physical or emotional pain.

A one-to-one session can be a tremendously liberating experience and is especially good for someone who wants to concentrate on a particular symptom or situation that's holding them back in life. Before I give a one-to-one session, I ask clients to describe the reason for their visit. This helps me to choose the appropriate instruments and techniques for their needs. Following the treatment, which may involve the client experiencing the therapeutic benefits of an ASC, I ask questions that help the client reflect on the 'conversation' that they've had with the sound.

How many sessions does healing take?

If you want to work on something specific, you may find it beneficial to have a course of treatment with a professional therapeutic sound practitioner. The number of sound-healing sessions that any given person opts for will depend on all sorts of factors, including what they would like to gain from the sessions, how fast they respond to sound experiences, how much sound practice they do themselves at home to complement any work they plan to do with a professional practitioner, and many more.

However, the following rough guidelines can provide a useful starting point when assessing your initial needs. To enable the practitioner and client to be

able to see if an intervention is successful, you should begin with a one-to-one session every week for four weeks. After this time you and your practitioner will have a good idea as to how the sound treatment is affecting you and also how many sessions (and at what intervals) may be recommended going forward. After this point, your practitioner may suggest spacing out your one to-one sessions with group 'maintenance' sessions as your symptoms and/or wellbeing improve.

For optimal maintenance of wellness, I recommend a short session each day using sound to induce some degree of altered consciousness (see pages 130–34), with a longer one-to-one or group session once a week. If your life circumstances won't allow you to do both daily and weekly sessions, do your best to make time for personal practice at least twice a week and a group session once a month. Personally, I feel that just like a keep-fit or yoga session, a soundbath (or equivalent relaxation session) should be part of everyone's weekly regime. If you're looking for general relaxation, release of muscle tension and stress management, a weekly group sound relaxation session should be enough.

How do i prepare for a sound session?

The healing process is helped only when we feel undistracted and at ease, so I recommend that you wear comfortable clothes to a session, and avoid eating a heavy meal beforehand. The sound healer or therapist will ask you several questions in advance to make sure that the process is suitable for you and so that he or she can understand what you're hoping to achieve. You'll most likely also be asked to complete a form that gives basic health information and gives consent for the treatment. This is standard procedure within complementary therapies and is there to protect you and the practitioner.

What are the qualities of a good sound practitioner?

All wellness practitioners, in whatever field, need to do their own regular practice that includes self-reflection. Being aware of our own 'stuff' and how to process it is essential. A good sound practitioner also needs to be a good listener to create a safe and professional space in which clients can explore their therapeutic journey without fear or anxiety.

Anyone working with sound has to have a good relationship with the

instruments, knowing how to use them sensitively and appropriately, and have knowledge of their 'sonic signatures' (see box, opposite). No two Himalayan singing bowls or gongs are the same, so practitioners must know how to use their own, specific instruments. Finally, a good sound practitioner will have had lots of training to know which playing techniques create certain sounds and how to create a therapeutic sound session that 'lives and breathes', rather than a session that is one-dimensional, static and lifeless. The Therapeutic Sound Association website (see page 141) offers a list of reputable practitioners.

How can i use sound therapeutically at home?

The chances are you are already using sound in therapeutic ways at home without even realizing it. For example, when you choose a piece of music with the specific aim of energizing or relaxing yourself, you're 'healing' yourself with sound. And when your favourite track gives you chills or goosebumps, it's a sign that you have given yourself a quick boost of endorphin, a natural anti-depressant chemical associated with the reward centres in the brain. Similarly, the sound of birdsong, children's squeals of delight during play, rhythmic waves lapping gently on a shore or the rustle of trees in the breeze can all affect us in positive ways. It therefore follows that simply by being more aware (or mindful) of times when you hear such things, and by making an active choice to listen to them more often, you will already be treating yourself to the benefits of what we call 'home practice'.

However, for more targeted or specific work you might also like to use either your own voice or musical instruments as part of a deeper therapeutic/healing process. Something as simple as singing in the shower can be a great creative release, while taking a few minutes to practise toning or overtoning (see pages 97–100) can be really soothing. Although there are certain instruments (such as the gong and the crystal bowls) that are best used with a practitioner, most are easy and fun to experiment with at home. A drum (and rhythm in general, see box opposite) or a Himalayan bowl, for example, can be great for home use.

FOCUSON SENSING SONIC SIGNATURES

Playing an instrument produces a certain set of harmonics that reflect the ‘timbre’ (the tone quality) of the instrument. I call this the instrument’s ‘sonic signature’ because, just as our own handwritten signature is unique to each of us, so is each instrument’s timbre. Think about the sound of an oboe and the sound of a flute. Both instruments can play the same note, even at the same time, but the tone of the sound they produce will mean that you can distinguish one instrument from another. The timbre is the result of the material the instrument is made from, the way it makes the sound (whether by plucking, hitting or blowing, for example), and the particular harmonic structure it makes when someone plays it. It is the overall ‘personality’ of the instrument, if you like.

TRYIT USING RHYTHM THERAPY AT HOME

Ideally, you’ll need a drum for this exercise, but you could tap your thigh with the palm of your hand.

1 U se your drum to play each of the following rhythms for a minute or two:
- Lub-dub, like a steady heartbeat (not too fast)
- Two-beat rhythm, like a march
- Three-beat triplets, like a waltz
- Four-beat rhythm that undulates, like an American Indian-style beat (STRONG, weak, weak, weak)

2 Repeat the sequence, this time moving around the room if you can, to feel the rhythm more precisely.

3 After a few minutes write down a few key words to define how each rhythm felt within you. For example, lub dub = loving, peaceful, calming; two-beat = strong, structural, relentless; three-beat = soft, drifting, creative; four-beat = steady, stable, dancey.

4 U se each rhythm as a ‘sonic vitamin’ when you need to bring that particular influence into your life. Just 5-minute sessions can usually do the trick.

CHAPTER 6

What are the day-today benefits of using therapeutic sound?

We've heard a lot so far about using therapeutic sound to create states of deep relaxation, to balance, stimulate and calm energy, and to move toward altered states of consciousness. But what does all that mean in practice? This chapter brings the theory into daily life.

Will therapeutic sound make me a better listener?

Listening is different from hearing. Hearing is a mechanical action – you hear something or you don't. Listening is about giving sound our full and complete attention, whether that sound is a Himalayan singing bowl or a person talking. Working with therapeutic sound acts as a major 'tune up' for all of your senses. As you become more in tune with the sounds around you and with the therapeutic instruments you're working with, the more layers you'll be able to hear within those sounds and all the sounds around you. You'll also begin to listen to other people in a whole new way. Human emotions, expressed through minuscule intonations and inflexions in the voice, become so much easier to hear.

How often have you been speaking to someone whose eyes glaze over? Working with sound opens our ears, minds and hearts. It helps us to become good, deep listeners who don't get distracted, and who listen meaningfully (see box, opposite). When you truly and completely listen to another person, you'll be amazed at how it feels for both of you.

TRYIT PRACTISE DEEP LISTENING

Deep listening is a skill that takes time to master. This exercise will help you make a conscious decision to listen fully to someone who is speaking to you.

1. Listen to the person's breathing. Does it seem strained or relaxed when they speak? How does their breath reflect how they feel about what they're saying? For example, if they are telling you something stressful, are they taking short, sharp breaths?

2. Listen to their vocal tone. is it happy or sad, undulating or monotone? Does it imply a subtext to what's being said? is the tone life-

affirming or life-defeating?

3 Hold that person in your complete attention for as long as you can. Notice when your mind wanders and bring your attention back to their voice, breath and tone. Try not to judge, just hold that person in a loving space within you, with your full attention. If you find yourself internally judging what you're hearing, let those judgements go, but try to remember them for your own later self-reflection – what do they have to teach you about yourself?

can sound help me listen better to my own self and to learn more about how i think and feel?

In my opinion the best way to work therapeutically with sound is to use it as a consciousness-altering reflective tool. The more you work with sound in this way, the more you have the ability to listen to your inner goings on. If you use simple reflective techniques, such as those set out in the 5Rs model (see pages 64–7), which enable you to listen to and have a dialogue with yourself that allows you to investigate the motivations and triggers for your thoughts, you'll learn to transform your self-awareness, so that you can treat yourself with compassion and open your mind to a more unified, blissful and 'whole' way of being. If you really tune in to your inner dialogue, you will find that your reaction to external sounds, to what you say to others and what others say to you, as well as to what you see and do, triggers inner resonances and resistances all of the time. All you have to do is listen and make new decisions for improved ways of being based on your inner dialogue.

CASESTUDY EXPLORING SELF THROUGH SOUND

One of my students told me how she had used an everyday experience with sound to gain more insight into her own life: 'I was sitting in the park and a loud jet aircraft flew overhead. It startled me. I felt scared – I felt a knot in my solar plexus and my shoulders tensed up. I heard myself saying, "Aircraft shouldn't be allowed to fly over public spaces, disturbing people when they are trying to relax! " Using the reflection

techniques, I “heard” That my reaction was about being disturbed while i was trying to relax. This gave me something to reflect on. Do I get enough relaxation? Am i often disturbed when trying to find “me” time? Does “me” time need to take priority in my life?’

TRYIT PRACTISE REFLECTIVE LISTENING

This exercise aims to help you discover more about yourself through interaction with the sounds around you. You’ll need to practise it in a public space, such as a park, and find somewhere comfortable to sit with your eyes closed. Practise for 10 minutes altogether.

1. Listen. Identify sounds around you that trigger an emotional, physical or mental response. Explore the sounds one by one. How do they make you feel?

2. Identify one sound that causes resonance (see pages 66–7) for you. How do you feel? You might use words such as ‘expanded’, ‘warm’, ‘light’.

3. Identify a sound that causes resistance (see pages 66–7). How do you feel? You may come up with words such as ‘contracted’, ‘dark’, ‘heavy’. Explore how you experience this resistance. Does it manifest as a feeling of heaviness or tension? What emotions does it trigger in you? How does your resistance reflect your inner nature or past experience? The sound of children playing, say, may trigger feelings of sadness, perhaps for the loss of a carefree time in your life.

Can sound help me connect with the natural world?

Everything is connected – you and your environment are inextricably linked. The more you work on your wellbeing through sound, the more you’ll feel connected to everything. This is one of the benefits of using sound to induce an altered state of consciousness (ASC; see pages 130–34), as ASC enables a

greater appreciation of the beauty around you and a greater sense of connectedness to all that is.

Can therapeutic sound help me cope with stress?

An overall feeling of calm is probably the most common effect of working with therapeutic sound. Over the years I've certainly found that I've become generally calmer and more considered. When conducted with relaxation in mind (remembering that some sessions are intended to be stimulating, for example), therapeutic sound sessions can reduce blood pressure and heart rate and relax the autonomic nervous system. Furthermore, the session can slow down our brainwaves, taking them from an awake and alert state to a more altered, deeply meditative state. The result is a lovely, drifty feeling, like the one we might feel just before we are about to go to sleep, which brings health benefits that enable us to be better able to respond openly to the demands of everyday life.

What sonic 'quick fixes' are good for acute stress?

One of the best things about sound is that it is always around us and within us, so turning our attention to sound can instantly provide a distraction, bringing us into the moment. This might at least invite us to stop and pause before reacting, and at best it can instantly tune us into a deep inner peace that brings back a sense of calm. See the techniques in the box on pages 120–21 for some sonic 'quick fixes'.

Are there any sound techniques I can use each day to offer relief from chronic pain?

Humming is one of the best exercises for physical pain, as it massages the body from the inside. Keep the pitch low and, if you can, try to notice where in the body you can feel the sound resonate. Try to direct the pitch so that you can feel the sound in the part of your body where you experience pain, or as close to it as you can. Practise in five-minute bursts as often as you can. I use this technique myself for neck and back pain, and one of my students swears that humming into her broken wrist helped the bones to heal more quickly (much to her doctors' amazement!).

TRYIT TAKE CONTROL OF ANXIETY

As soon as you feel stress coming on, wiggle your toes and feel your feet on the ground. Then, try one of the following:

Align to the rhythm of life

This exercise is great for grounding a busy mind at a moment's notice. It works best if you're lying or sitting, but I've used it on a crowded subway train.

1. Close your eyes. Using the flattened fingers of one hand against one thigh, tap out a heartbeat rhythm: 'lub-dub' then count 'two, three, four' silently, before repeating the tap – 'lub-dub' [two, three, four], lub-dub [two, three, four]. Don't let your mind wander, just focus on the beat.

2. After a few minutes of using a silent count of four, extend the silent count to five for a minute, then extend to six for another minute. Keep extending the count a minute at a time for five minutes in total (the last silent count is nine).

Giving-to-self hum

Practised for a few minutes, this humming technique provides a quick fix as stress takes hold, but you can also use it for longer periods in therapeutic sound sessions when anxiety seems to be a long-term feature in your life.

1. Close your lips and hum in a low pitch, breathe in through your nose when you need to take another breath and then keep humming.

2. After a couple of minutes, experiment with the pitch – try a little higher or lower until the pitch resonates with you, but try to keep it generally to the lower end of your register. Keep humming for between three and five minutes to get the full benefit of the calming effect.

How can I use sound to improve my focus at work?

We have learned that high pitches stimulate the system. We can also use vowel sounds and pitch to change the vibration or resonance of the voice. This makes the voice a brilliant source of 'sonic caffeine' – an energy boost when you feel your concentration beginning to slip. Toning a high pitched 'EEE' sound will resonate in the skull and improve mental clarity and concentration, giving you mental energy – although you may want to spend a few minutes outside the office to practise it!

A quieter way to give yourself a boost is with rhythm therapy. Spend five minutes tapping a fast marching beat (think dance music) on your thigh or count in your head. This type of rhythm helps to stimulate the brainwaves and can be useful when you need to take in or express information clearly.

Can sound strengthen my bond with my partner?

Good relationships rely upon good communication. As we know sound has been a powerful communication tool since the time of the very earliest humans (see page 70). At a fundamental level, relationships are all about resonance – we use the expression 'on the same wavelength' to describe people that are close. Working with sound really helps us to be more sensitive to the resonances we have with a partner. In turn, this increased sensitivity makes sound a perfect way to strengthen bonds, dissolve resistance and bring two people closer together. The voice is the best instrument for using therapeutic sound to improve relationships. This is because we tend to convey our thoughts and emotions through our voices, and in this way the voice is the closest and most intimate instrument of all – we are the instrument itself

TRYIT HAVE A 'HOLDING CEREMONY'

This exercise combines sound with the technique of eyegazing to enable you and your partner to connect more deeply with each other. I call it a holding ceremony, because you hold each other with your gaze and voice.

1. S it comfortably facing each other with your knees almost touching (perhaps in chairs opposite one another, or on the floor, with your legs crossed). Gaze into each other's eyes and start to tone an 'OOO' sound in a pitch that is comfortable for you both. This is the vowel sound for the sacral chakra (see page 80), which in Vedic thought is connected with our relationships, sensuality and sexuality.

2. As you tone, allow your gaze to soften. After a few minutes you may notice that your partner's face seems to melt away, leaving only their eyes. (Don't worry if you giggle – just re-focus and continue.)

3. T ry to maintain the 'OOO' and gaze-holding for at least 10 minutes. Then, finish the exercise by embracing from your sitting position and toning 'AHH' in a low pitch as you do so. 'AHH' is the sound of the heart.

CHAPTER 7

What does therapeutic sound teach us about consciousness?

When we work with sound, the greatest healing effects occur when we tap deep into our psyche – into our consciousness – and allow our inner explorations to teach us about who we are, how we feel and how we respond to everything around us. This brings us closer to our own true nature and allows us to live in a way that is true to ourselves, our beliefs and our motivations. This chapter explores the relationship between sound healing and consciousness.

What is consciousness?

From the Buddha to Aristotle, Plato and Descartes, the nature of consciousness provides debate that is centuries, even millennia old. Even though science has stepped in to try to resolve things, we still don't fully understand it. We do know, though, that consciousness is a fundamental component of who we are. Consciousness is a continuum, spanning from completely unconscious to hyperawareness. We know that through sound we can alter consciousness, and in doing so promote self-healing. And not just that: ASCs can benefit the evolution of humanity as a whole, through the softening of the ego that occurs (because of their unifying nature), the more we practise them (see pages 130–34).

How do we know that consciousness exists?

Consciousness is not static – it has to evolve because we process considerably more information now than we did in the times of our most primitive existence. The arts, music, fashion, culture, storytelling and spirituality are all evidence of how our consciousness has evolved. Not only that, but in many ways we are more ambitious (for ourselves and others), more humane, more empathetic, more compassionate and more in tune with and tolerant of societies and situations other than our own. All this is evidence of evolving human consciousness. When we encounter setbacks in our evolution – war, famine, invasion, drought, epidemic and other natural disasters – we use consciousness to find solutions. And each time we find a solution, we reach another rung on the ladder to a more expanded and unified state of being.

How does neuro-biology explain consciousness?

Neuro-biology looks at consciousness in terms of the biological functioning of the nervous system. Many living things – plants, bacteria and every human

cell among them – exhibit patterns of behaviour (a flower opens to the sunlight, for example), but do not possess the master controller that is the brain. A person also behaves in certain ways in response to stimuli and has a brain, but if the neural processes that enable individuals to be aware of themselves are not present, they may not possess higher levels of consciousness, including reflective thinking and empathy, or understanding of others. Humans are not dependent on consciousness for life, but we are dependent on it for higher brain functions.

How does psychology explain consciousness?

When we dream, most of the time we are not aware that we are the dreamer. Rather, we are completely immersed in the dream as if it were happening around us, without our influence. When we are awake, most of us are able to separate the 'self' from the mind-stream that is our thought process – we are aware of the thoughts running through our heads, but we can also view them from a distance, objectively, as if they were playing out on a movie screen in front of and separate from us. Consciousness is the thing that gives us our objectivity, our ability to reflect on our thoughts – without it we'd be just like the dreamer and have no objectivity at all. The ability to step back and reflect on our actions, thoughts and emotions (as in 'the 5Rs' model; see pages 64–7) – let's call this our 'process' – is, in turn, crucial to the evolution of our own consciousness.

TRYIT DISCOVER THE ESSENCE OF CONSCIOUSNESS

This is a really useful exercise to develop a sense that you're more than your thoughts and your feelings; you're a fully alive, conscious being, who, using sound as a medium to reflect on the self, can control thought and emotion at will.

1. Sit in a quiet place – outdoors is best – with your feet flat on the floor. Feel the bench or seat supporting you and be aware of the ground at your feet. Spend a minute or two focusing on your breath – become aware of the inbreath and the outbreath.

2. With your eyes closed, focus on a sound in the world around you –

choose something beautiful that sings to you. When a thought arises, put it down. Bring your consciousness back to the sound.

3. Now let that sound go and hear and feel the beat of your heart. At the same time hear and feel the air leaving and entering your lungs with each breath. Allow their sounds to completely fill your consciousness.

4. Now tune in to the low-level ‘electrical hum’ of your body – you might feel it as a tingling sensation. This is your vitality, your aliveness; it is the essence of you. You are a fully functioning, conscious being. Your thoughts do not define or control you. You are free from ego. When you’re ready, open your eyes and allow yourself a moment to come back to full alertness before continuing your day.

What is ego?

Some psychologists and spiritual teachers refer to the aspect of our consciousness that can hold us back from evolving as the ‘ego’ or ‘small self’. The ego is constructed from beliefs and behaviours that we have adopted over time. These beliefs and behaviours can be complex, affecting different levels of our being, and may be the result of a particular experience or traumatic event. They may even affect our physical health (think how an argument with a partner – whom the ego tells us is, say, neglectful – can trigger a flare-up of a condition such as irritable bowel syndrome).

The mind–body connection forms the foundation of sound and all holistic therapies – holistic meaning the mind, body, emotions and (in some disciplines) spirit. All of them have a bearing on our overall health and wellbeing. It makes a huge difference to the effectiveness of any therapeutic practice to consider how the ego affects all levels of our being, because the triggers for dis-ease may lie in the physical, psychological, emotional or spiritual self.

What is an altered state of consciousness (ASC)?

An ASC occurs when there are changes in an area of the brain known as the

dorsolateral prefrontal cortex (DL). In 1998 the International Study on Altered States of Consciousness (ISASC) analyzed 1,133 subjects from six countries with the aim of finding out how to identify when a person is experiencing an ASC. Arne Dietrich, Professor of Psychology at the American University of Beirut, found three dimensions of altered states, but today we know there are even more. The following are the domains of ASC that those working with therapeutic sound most commonly experience.

Visionary restructuralization

This aspect of ASC is linked to visual pseudo-hallucinations, synaesthesia (a 'mixing' of the senses when people see sound as colour or shape, for example) and illusions. The most common aspect of this state is something I call 'jellyfish', when coloured bands or blobs pulse toward or away from the person having the ASC. Sounds, objects and sensations can take on a different meaning than usual. My clients and students have told me that they felt as if they have been stretched or shrunk, or in some other way morphed. Some report being transported to another place, or having visions of strange people or lands.

Oceanic boundlessness

The term 'oceanic boundlessness' describes feelings of unity and transcendence of time and space. During ASC, including sound-induced ones, many people feel as though they're 'out of body' or that things around them aren't real. The feeling of oceanic boundlessness can also be accompanied by a positive, even blissful feeling. When people experience this aspect of an ASC they tell me that they 'feel like the ocean', they are 'floating in space' or 'their edges have melted'.

Fear of loss of self (ego dissolution)

Deep ASC is very powerful and can induce unfamiliar feelings, particularly in someone who already has profound anxiety or a fear of losing control. During deep ASC some people begin to feel anxious and as though they're being threatened in some way (which of course is not true). Some describe this as a feeling of 'losing themselves' or that they are 'never coming back'. These feelings are a sign that we are letting go habits and beliefs that restrict us, or prevent us from following our true nature.

This illusion of the loss of ego and the ‘death’ of the old self is very similar to the stories that shamans recount about using sound to travel between the worlds, shed old beliefs and illnesses and return with new knowledge and healing. Therapeutic sound, when we let it, softens the ego state, which can be challenging, especially if we have a belief that is so engrained that, even though it is painful, we cannot imagine life without it. This ‘devil you know’ becomes too scary to let go and it can trigger panic. Although this threat of ego dissolution is an illusion, it can feel very real and anyone who experiences it needs to work with a trained practitioner.

Therapeutic sound softens the beliefs within the construct (see page 67) that make us who we are. If one of those beliefs begins to define us, the ego can want to hang on to it, triggering feelings of fear if anything threatens its loss, even if it is painful, physically or emotionally. The fear of letting it go (the fear of ego dissolution) into an unknown, pain-free world is overwhelming. A fluid, softened construct that opens us to a ‘new self’ becomes scary.

Transcendence of ego and unified state

An ASC without resistance enables us to experience a profound sense of ecstasy and bliss and of unification with all things. Boundaries between the self and the universe completely disappear and an individual may have a divine or mystical experience. In my opinion sound-induced ASC enables us to experience the universal truth that all things are interconnected. It encourages a dissolving of attitudes and beliefs that stand in the way of the person being able to achieve a higher level of consciousness and self-awareness. As the construct and any related barriers soften and/or dissolve, we experience a greater level of mental calm and connectedness to the wider world, to each other, and even to the universe. People tell me that in this state: ‘I felt as though I became one with the universe’, ‘I was introduced to my guides and angels’ or ‘I knew everything.’

In summary

When we are aware of our self as a separate entity to our thoughts we demonstrate a higher level of consciousness. When we practise getting to know the essence of our consciousness and realize that we are more than our thoughts, we are then in the driving seat of our lives. ASCs occur naturally every day through such experiences as day-dreaming and sleep-dreaming, but

these natural states are often fleeting and difficult to sustain; they are also often difficult to draw experience from. By applying sound in a specific way, we can enter a deep and sustained ASC.

FOCUSON RECOGNIZING EVERYDAY ASC

Although an altered state of consciousness (ASC) sounds like something specialist, it is actually not hard to achieve – we have ASCs all the time: when we're day-dreaming, when we 'phase out' during a conversation, or when we're driving and arrive at our destination not entirely sure how we got there, for example. In those cases, though, an ASC is a result of snatched moments and doesn't have the therapeutic benefits of the deep kind of ASC that occurs as a result of techniques used in a therapeutic sound session.

Do I have to have an ASC to benefit from sound?

The brain needs to go into an ASC for good health – being in alpha and theta brainwave states (lower brainwave states; see box, page 28) enables it to process and make connections, improving memory and mental agility. Alpha brainwaves (oscillating at 8 to 12 Hz) and theta brainwaves (3 to 7 Hz) are necessary for maintaining potassium sodium levels, which are in turn essential for the restoration and repair of the central nervous system. Thinking like this, we know that, although it might sound a little 'out there' or esoteric to some, an ASC is in fact a psychological state that has myriad benefits for health and wellbeing. However, we also know that through its physical vibration within us, through resonance and resistance (see the 5Rs on pages 64–7), sound can benefit us even without our achieving an ASC.

How do I know if I've achieved an ASC?

Following a sound session, my clients often report feeling deeply relaxed, peaceful – even blissful. Any physical or emotional pain gently melts away on the sound. Sometimes they have flashes of insight regarding a problem or current situation that was troubling them. Something troubling them at the

start of the session becomes less potent after it. This ‘softening’ enables clients to gain respite from their situation, a relief from their symptoms and often a new perspective on the next step to take toward healing, in whatever form that comes. If you experience any of the ways in which ASC affects consciousness, including feeling like you’re floating, seeing colours behind your eyes, having spiritual or divine experiences, or having a sense of physical transformation, you’ve probably been in an ASC.

Is there research into the therapeutic effects of ASC?

Since the beginning of the 21st century there has been a resurgence in research into the benefits of ASC for therapeutic purposes. However, in most experiments psychedelic drugs, meditation or hypnosis have been used to induce ASC and there is little research that has looked at sound-induced ASC.

Nonetheless, my own research at BAST has shown that therapeutic sound treatments specifically aimed at producing natural, easy, quick and equally effective ASCs can do so without risking the side-effects associated with taking psychedelic drugs. A significant number of participants reported afterwards feeling completely safe, and experienced a profound sense of peace and a release of muscle tension. Their inner conflicts and contradictions seemed to dissolve, physical tension and pain disappeared from their body. Regular therapeutic sound sessions promoted the physical benefits of relaxation, such as reduced muscle tension and stress, and lower blood pressure.

FOCUSON CREATING A SOUND INDUCED ASC

To enable a deep ASC, I have developed techniques using sound (rather than rhythm) to take the client on a sonic journey that starts with more complex sounds and empties into purer sound. So, for example, in a treatment I will move from Himalayan singing bowls or gongs to the more expansive sounds of the crystal singing bowls. Specific playing techniques will deepen an ASC: I may play more melodically at the start of a session and get progressively more spacious. The pitch may

start off higher (more stimulating) and then go deeper, returning to higher pitches. The percussion sequence at the end of a treatment is exactly the same, in reverse.

To bring clients gently back to consciousness, I begin with light and ethereal sounds, and then gently trickle a rainstick for a couple of minutes before starting to bring shakers in. As I change from lighter, smaller shakers to crunchier-sounding ones, the sounds get heavier, louder in volume, and faster in rhythm. This brings the brainwaves into a more conscious and aware state. You can visit my website to try out these ideas for yourself (see page 141).

What next?

This is such an exciting time to be working in this rapidly growing field. Increasing numbers of research studies, each one probing a bit deeper or into another corner of therapeutic sound technique, are good signs that there is a longer-term interest in sound healing and therapy, and an increasing thirst for understanding. The next few years will, I'm sure, yield lots more exciting developments as conventional healthcare becomes increasingly focused on finding more complementary and alternative treatments to work alongside orthodox medicine for optimal patient care.

In the last ten years the understanding of what it is to be healthy has changed. Whereas we used to think of health as the absence of dis-ease, we now place the emphasis on positive wellbeing. This way of thinking considers our social, psychological, biological and spiritual health – and it has been adopted and promoted by the World Health Organisation (WHO), which defines health as 'physical, mental and social wellbeing, not merely the absence of disease or infirmity'. The WHO has also declared mental wellness to be of utmost importance, stating that positive mental health is the 'foundation for wellbeing and effective functioning for both the individual and the community'. This is really encouraging for the future of therapeutic sound.

If you have been inspired by the many aspects of therapeutic sound explored in this book – as healing, as therapy, as a form of relaxation – gather some therapeutic sound instruments and dive in! Your instruments don't have to be expensive or 'official': a drum, a rainstick, your voice, a deeply relaxing piece of your favourite music … these are all good ways to start. Have some fun exploring your different levels of being through the effects each sound has on you.

And, of course, if you enjoy working with these techniques, or any of the techniques or suggestions in the book, you can take a free online course that I have designed by going to healthysound.learnupon.com. Or if you are simply intrigued and inspired to delve further, contact the Therapeutic Sound Association (see page 141) and find out how you can get involved – as someone who wants to feel the benefits of therapeutic sound for themselves under the guidance of a practitioner, or as a practitioner yourself. The wellbeing organization LifeSonics® have 'sound spa' sessions that use

specific therapeutic sound techniques to induce ASC. And, of course, whatever your question or thought about the wonderful power of sound, I will always be happy to hear from you – you can contact me through my website (see page 141).

Resources

Further reading

Clarke, D and Clarke, E (2011), *Music and Consciousness: Philosophical, Psychological, and Cultural Perspectives*. Oxford University Press: Oxford
Cooper, L (2015), 'Sound Affects: Sound Induced Altered States of Consciousness and Improved Health and Wellbeing' www.britishacademyofsoundtherapy.com/wp-content/uploads/2016/01/ASC-research-article-HealthySound.pdf

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Levitin, D (2008), *This is Your Brain on Music: Understanding a Human Obsession*. Atlantic Books: London

Mithen, S (2006), *The Singing Neanderthals: The Origins of Music, Language, Mind and Body*. Harvard University Press: Massachusetts

Sacks, O (2007), *Musicophilia: Tales of Music and the Brain*. Alfred A Knopf: New York

Statnekov, D (2003), *Animated Earth: A Story of Peruvian Whistles and Transformation.* North Atlantic Books: Berkeley

Useful websites

www.britishacademyofsoundtherapy.com

www.healthysound.com

www.lifesonics.com

www.lyzcooper.com

ABOUT THE AUTHOR

LYZ COOPER

One of the world's leading experts in sound therapy, Lyz Cooper brings ancient knowledge together with cutting-edge science and her own research and development to create techniques that improve health and wellbeing. She has an MSc in Applied Music Psychology and in 2010 was awarded a fellowship to the Institute for Complementary and Natural Medicine (ICNM) for her contribution to the worldwide field of therapeutic sound. She is co-founder of the Therapeutic Sound Association and founder and Principal of The British Academy of Sound Therapy (BAST). Find out more about Lyz and her work by visiting the websites listed on page 141.